AUGUST '56

MODERN TEXTILES MAGAZINE

Specializing in Rayon and Synthetic Fibers since 1925

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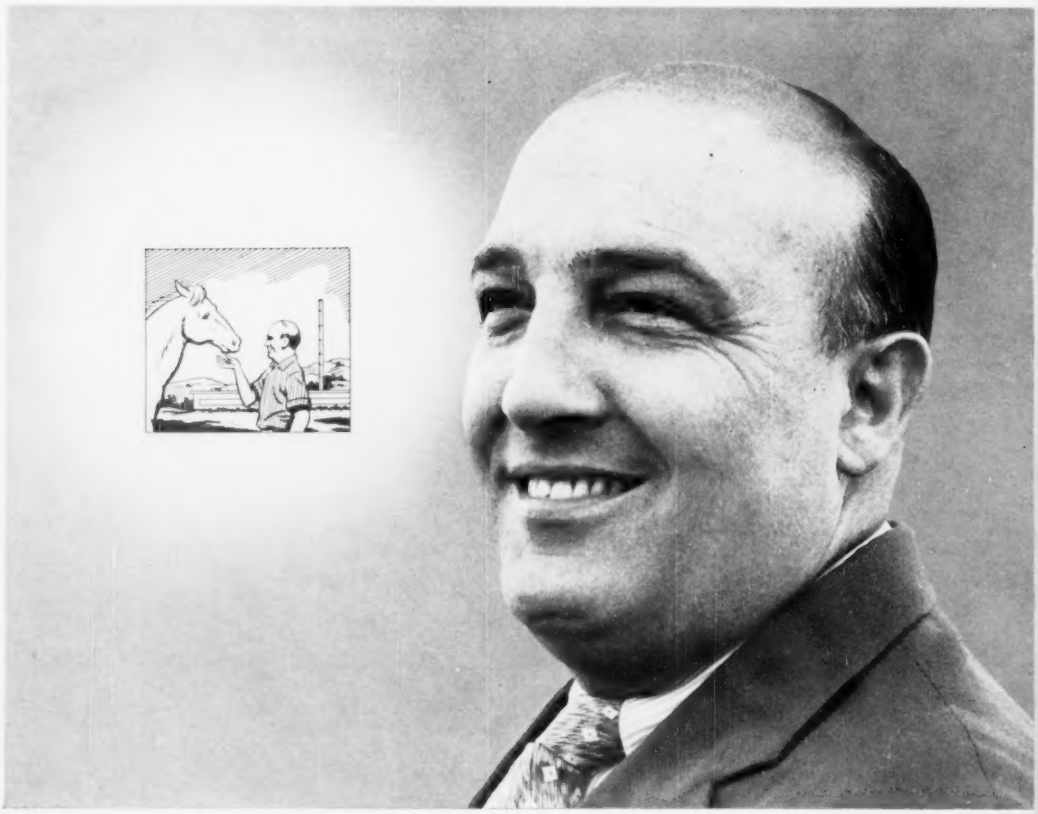
FABRICS

FINISHES

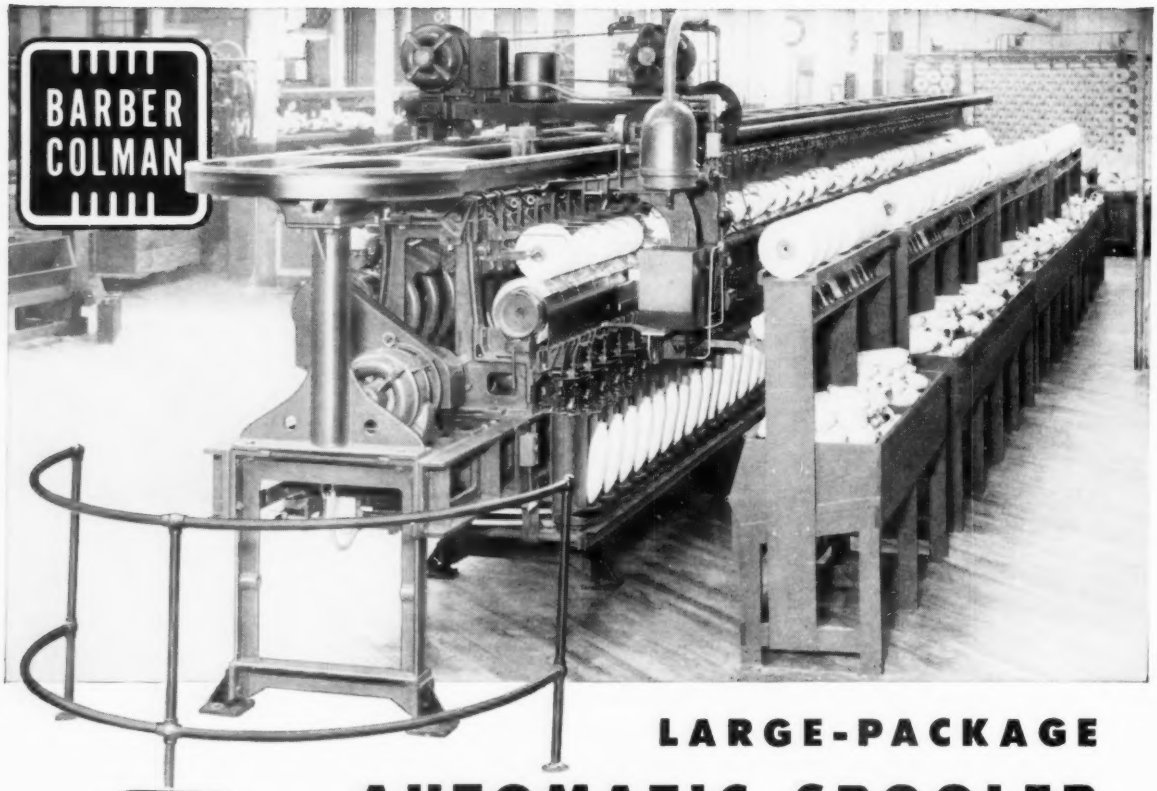


Printing and dyeing can be profitable. Read FRANK PERCARPIO'S story-page 31

THIS MONTH'S SPECIAL FEATURES

Perkin Centennial program
Man-made fibers help cotton
More on fabric ornamentation
Teachers learn about textiles
Newer fibers in three-way blends

AND 16 MORE USEFUL ARTICLES AND TIMELY REPORTS



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In accord with the trend toward larger packages, the new Barber-Colman Type "D" Automatic Spooler offers advantages of special design for greater production and better product. While the machine resembles the familiar Type "C" in general appearance, many details have been changed and improved. These include new methods of handling bobbins, new drive and support for the cheeses, new yarn guides and cleaning devices, new vacuum system, added safety arrangements, new means for by-passing a running thread, and various others. All the way through, this new machine is built to fit the modern methods of up-to-date mills. *Consult your Barber-Colman representative for full details.*

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MODERN
TEXTILES MAGAZINE*

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Established 1925

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Rayon and Acetate Fibers Producers Group ..... Empire State Bldg., New York
National Federation of Textiles, Inc. ..... 389 Fifth Ave., New York
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Silk and Rayon Printers and Dyers Ass'n of America, Inc. ..... 1450 Broadway, New York
Synthetic Organic Chemical Manufacturers Association ..... 41 E. 42nd St., New York
Textile Distributors Institute, Inc. ..... 469 Seventh Ave., New York
American Rayon Institute ..... 350 Fifth Avenue, New York

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Avisco Adopts L 22 as Standard For Fabrics Getting Integrity Tag

Adoption of American Standard L 22 for all fabrics displaying the Avisco Integrity Tag was announced last month by Harry Dalton, vice chairman of the board of directors of American Viscose Corp., at a press conference in New York City. L 22 is a minimum performance standard for rayon and acetate fabrics established in 1952 by the American Standards Association under the sponsorship of the National Retail Dry Goods Association and other industry and consumer groups.

The Avisco Integrity Program was set up last year by American Viscose Corp. Under the program, the company licenses fabric converters and manufacturers who agree to observe standards established by Avisco. By last month's action, American Viscose makes the provisions of L 22 the minimum requirements for fabrics entitled to its Avisco Integrity Tag.

Since the establishment of the Integrity Program, more than 750,000 tags for individual items of apparel and home furnishings have been issued by American Viscose. At present there are 34 converter and 17 finishers licensed under the program, according to Arthur Wachter, chairman of the company's converter relations department. About five million yards of apparel fabrics are being produced each month under the Integrity Program, Mr. Wachter said. It is estimated that about 30 million square yards of rugs have so far been licensed and tagged under the plan.

American Viscose plans to continue its vigorous advertising campaign in support of its Integrity Program, C. Stuart Brown, advertising manager declared at the conference. Present at the conference also was Percy R. Meeker, vice president of Reeves Brothers which adopted L 22 eight months ago for fabrics processed at its Bishopville Finishing Plant. Mr. Meeker said that his company had not received a single return since it adopted L 22. He declared that Reeves was highly satisfied with L 22.

Three men who believe in standards: (left) J. Gordon Dakins, Nat'l Retail Dry Goods Ass'n; (center) Harry Dalton, American Viscose Corp., and (right) Percy R. Meeker, Bishopville Division, Reeves Bros.

Mr. Brown stated that in the future Avisco Integrity Tags attached to fabrics and apparel would state that the items were manufactured and finished in compliance with the requirements of L 22.

Chemstrand Plant for N. Ireland

LONDON: Chemstrand, Ltd. will build a plant for the manufacture of Acrilan acrylic fiber in Coleraine, Northern Ireland, according to Arvon L. Davies, managing director. In the first phase of its construction the plant will cost $10,000,000. The new plant will be in production by January, 1959. Chemstrand, Ltd. is a wholly owned subsidiary of the American company, Chemstrand Corp., Decatur, Ala.

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New Eastman Section Created

Eastman Chemical Products, Inc., a subsidiary of Eastman Kodak Co., has created a new chemical sales development section, separate from its commercial sales department, to accelerate new product development, according to Dr. J. E. Magoffin, chemical division sales manager. William M. Gearhart has been appointed manager of the new section. R. B. Herring has been promoted to chief chemist in charge of the service and development laboratories at Kingsport, Tenn.

Under the new setup, all work with products being considered for the first time, and those in the development stage, will be assigned to the new chemical sales development group. Mr. Gearhart and his staff will have the responsibility for coordinating all laboratory work and industry contacts in bringing new developments to commercial status. At this point, responsibility for handling such products and establishing normal customer contact will be transferred to the commercial sales department.

Allied Textile Research Unit

Construction was begun last month of a textile fiber application research unit by the National Aniline Division of Allied Chemical and Dye Corp. The new unit is located near National Aniline's Chesterfield plant at Hopewell, Va. The laboratory, which will be a modern textile mill in miniature, has been designed to provide immediate mill evaluation of Caprolan nylon, according to George Hotte, director of the company's fiber sales and service.

The new laboratory also will develop mill procedures for processing yarns and fabrics containing Caprolan nylon filament yarn and staple. Another phase of the laboratory's work will be development of new fabrics for apparel, home furnishings, industrial and military goods.

Vat Dye Institute Planned

Plans to establish a Vat Dye Institute, which will be incorporated under the laws of New York State, have been announced by a group of chemical and dye manufacturers.

Companies that have indicated they will become members include: American Aniline Products, Inc.; American Cyanamid Co.; Arnold Hoffman & Co., Inc.; Dow Chemical Co.; E. I. du Pont de Nemours & Co., Inc.; General Aniline & Film Corp.; Metro Dyestuff Corp.; National Aniline Division, Allied Chemical and Dye Corp.; Nyanza Color and Chemical Co., Inc.; Otto B. May, Inc.; Peerless Color Co., Inc.; Pharma Chemical Corp.; and Toms River-Cincinnati Chemical Corp.

The new Institute, according to its proposed charter, will seek to increase and expand consumption of vat dyes by promoting their proper end-uses through advertising and educational programs. The Institute shortly will elect officers and appoint an executive secretary.

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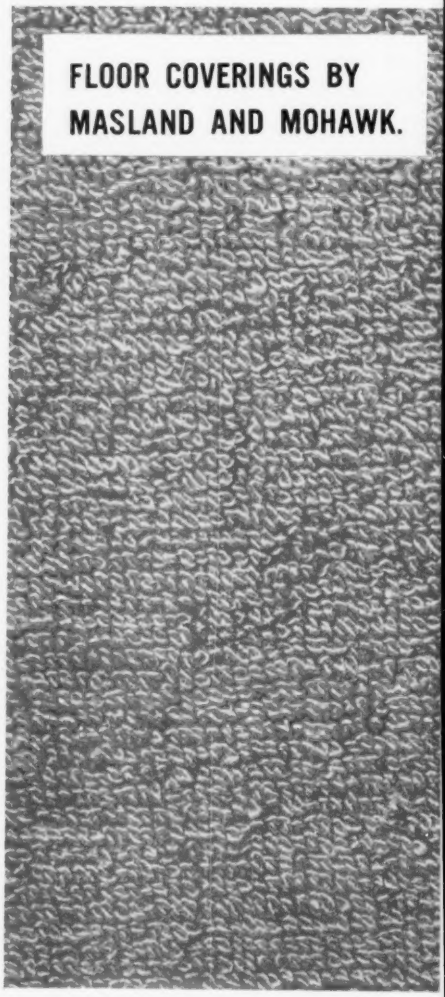

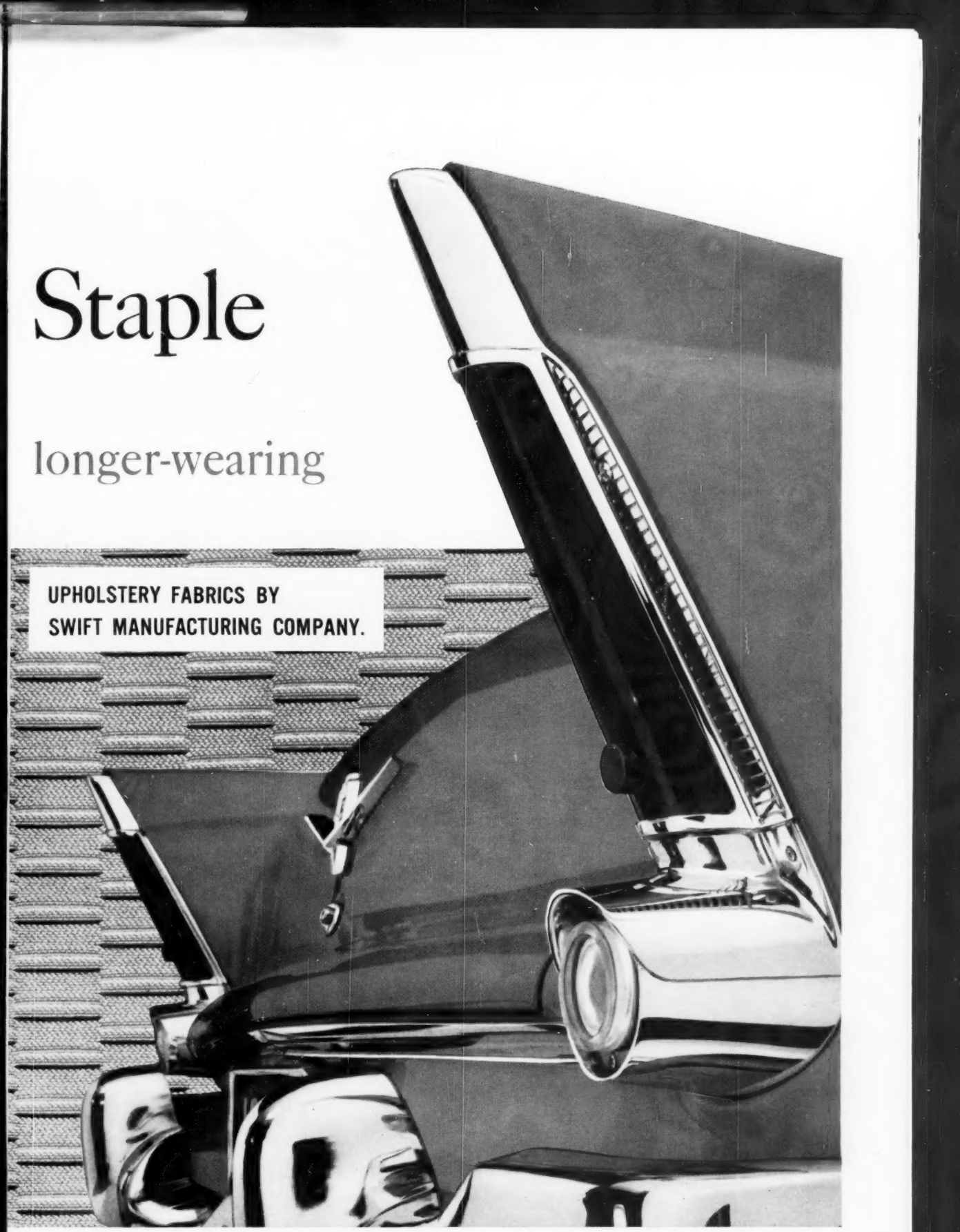
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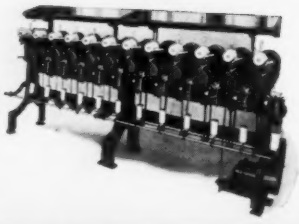
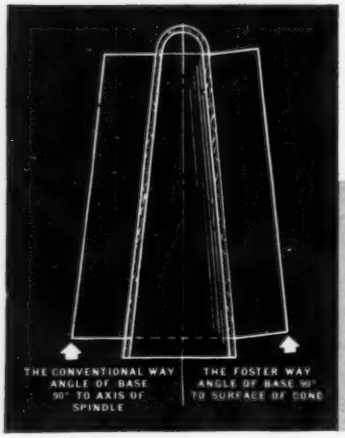
BANISH TWO ENEMIES OF GOOD RAYON KNITTING

NIP-I-TIS — unsightly tight stitches in knitted fabrics — is caused by catching of the yarn on the base of the cone as it delivers to the needle. The Foster Model 75 cone prevents it, because the angle of the base is wound at 90° to the *surface of the paper cones.* Thus each layer of yarn at the base is laid in a progressively higher horizontal plane, so that it can not drop down and "nip" the layer underneath.

SLUFFING — Creeping of the yarn towards the nose of the cone, so that it comes off in bunches — occurs most frequently when a cone is wound in the conventional manner, — with the angle of the base at 90° to the *axis of the spindle,* producing an *upward* pressure. The Foster Model 75 Cone practically eliminates sluffing because the angle of the base — 90° to the surface of the paper cone — produces a *downward* pressure.





Banish these two enemies of good rayon knitting. Install Foster Model 75 Winders or specify Foster Model 75 Cones.

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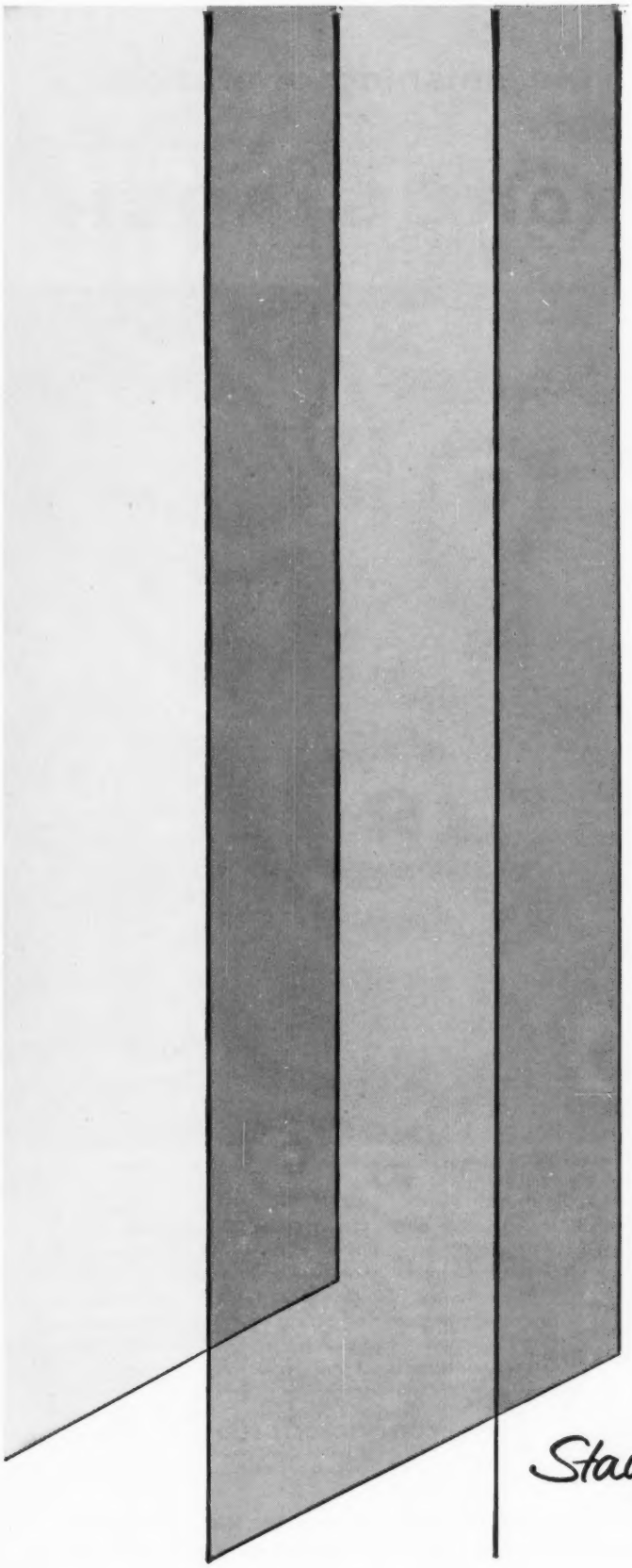
FOR WINDING NYLON, RAYON, SILK AND COTTON THREAD YARNS



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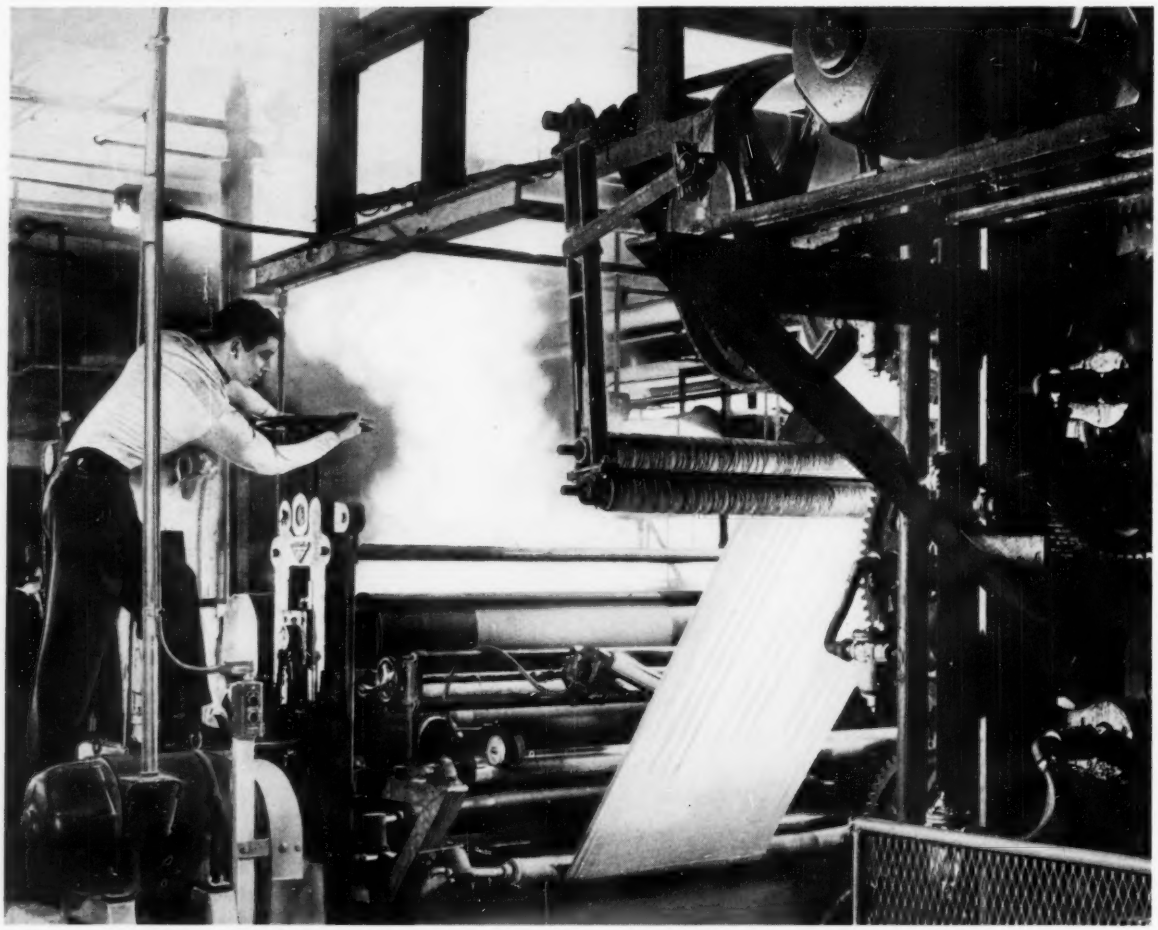

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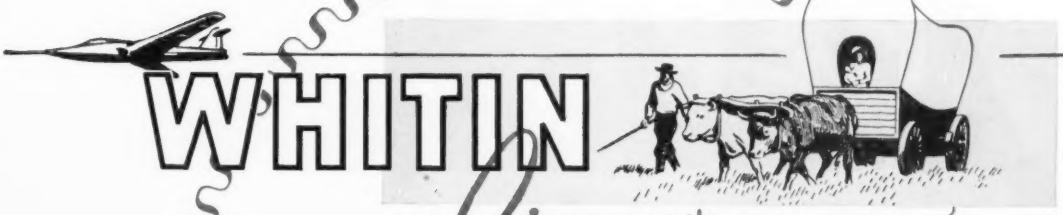

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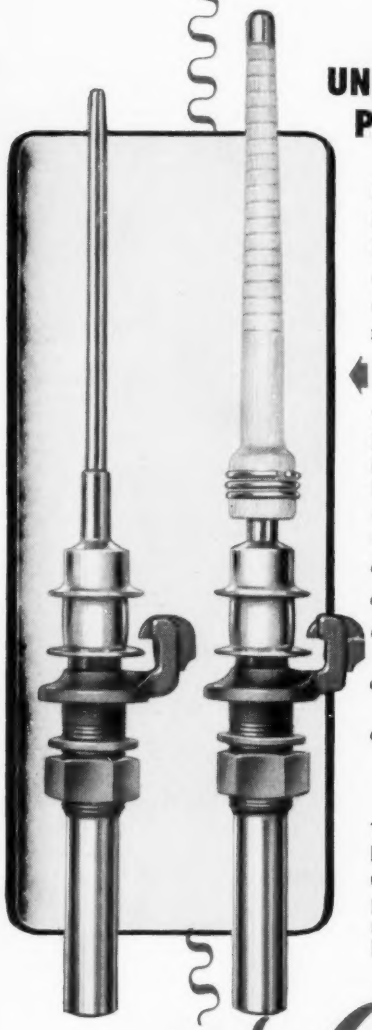

For outstanding performance, productivity, and low cost of operation, Whitin PIONEER Spindles for spinning are specified by leading mills. Their design, construction, and manufacture are the result of more than a century's experience.

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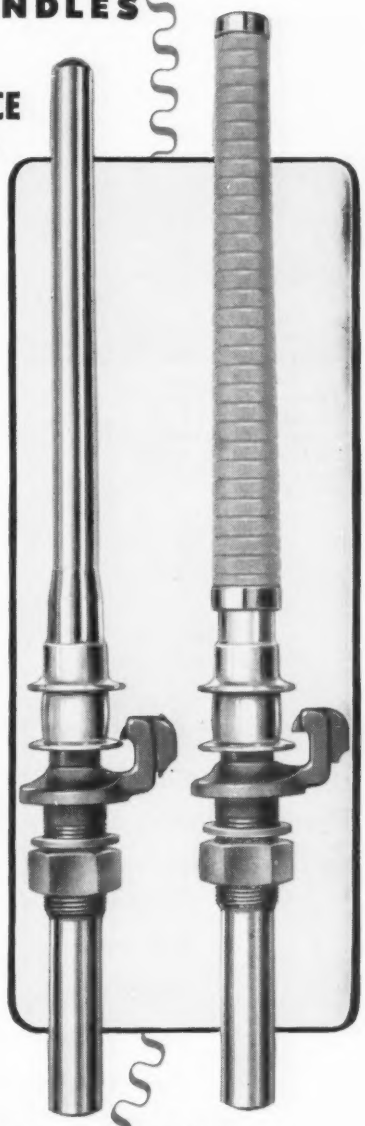

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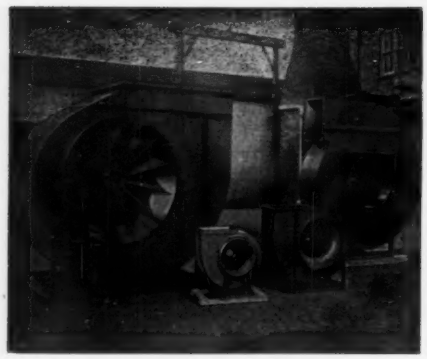
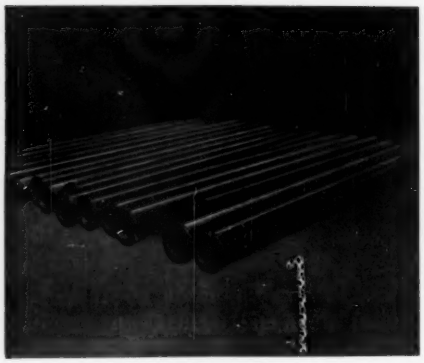
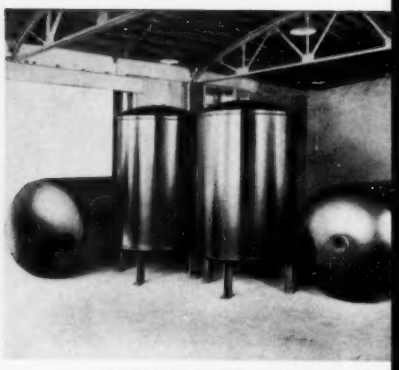


HERESITE COATED FANS AND BLOWERS SAFELY EXHAUST ANY CONCENTRATION OF ACID FUMES. THE COATING RESISTS CONDITIONS THAT WOULD ATTACK EVEN SPECIAL ALLOY METALS.



VALVES, PIPE LINES, PUMPS, SPOOLS, ETC. REQUIRE HERESITE PROTECTION FOR LONG TROUBLE-FREE SERVICE.



SOLUTIONS STORED IN HERESITE LINED TANKS ARE MAINTAINED FREE FROM CONTAMINATION AND CANNOT DISCOLOR THE SPINNING BATH SOLUTION.

HERESITE Provides

Protection of Metal Machine Parts
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Many Rayon manufacturers have availed themselves of the protection afforded by Heresite. The unique properties of this coating include chemical resistance and mechanical strength. The general value of Heresite to the rayon industry is demonstrated by its ability to prolong the life of

Traverse bars and arms . . . Complete cake wash machines . . . Soft water storage tanks . . . Blowers . . . Fume stacks . . . Acid storage tanks . . . Piping . . . Filter presses . . . Storage tanks for wash solutions . . . Centrifuges . . . Vacuum wash tanks . . . Bleaching tanks . . . Adaptors . . . Ductwork . . .

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DUOFOL

for your wetting, rewetting and softening operation

Do you realize that it only takes *one drop* of DUOFOL per gallon of solution (2-7 oz./100 gal.) to give your dyeing and "Sanforizing" solutions all the wetting, rewetting and softening properties required?

Although this droplet looks tiny, it has exceptional wetting power — even in water as hard as 500 ppm! And when it comes to speed . . . we can state categorically that DUOFOL is the fastest acting wetting-out agent on the market.

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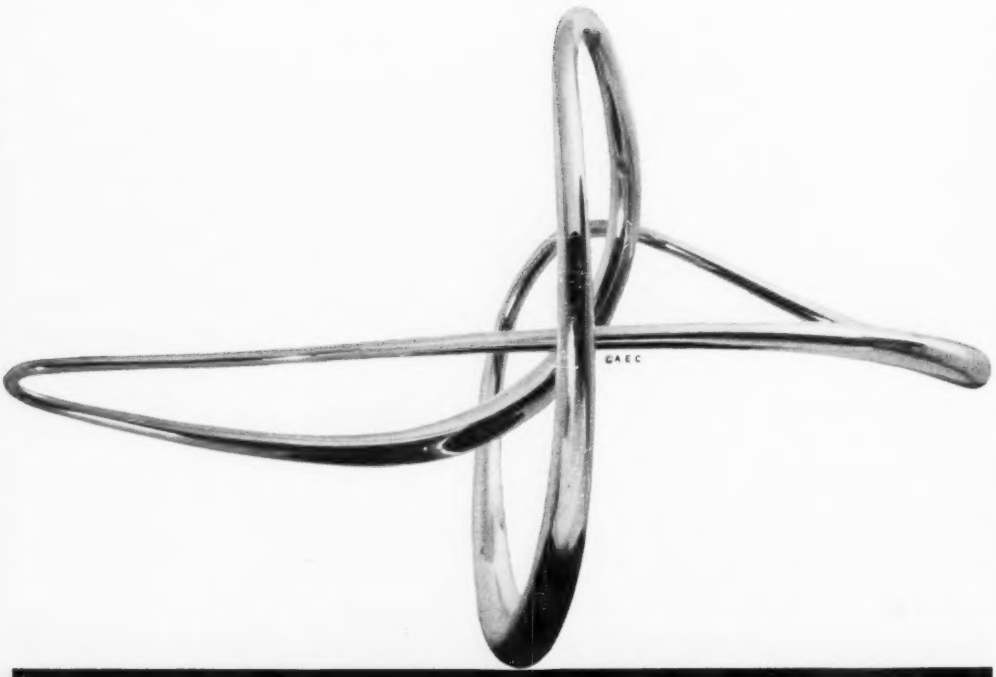
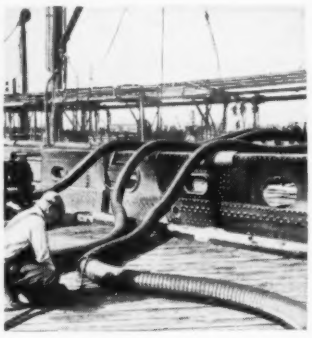


Sculpture by Jose de Rivera—symbol of American Enka Corporation, one of America's great producers of synthetic fibers.

Performance depends above all upon quality and planning. It is vitally important to the user to know that Enka has developed its product with his specific end use in mind from the very beginning. That is why Enka yarns consistently deliver satisfactory performance in action.

Manufacturers of industrial hose know they can rely on Enka high tenacity rayon to give their products the ***strength and durability*** they require. And, from the standpoint of economy, Enka high tenacity rayon offers these advantages at ***lower cost.*** Think what this can mean in your business and call American Enka today.



American Enka Corporation • *206 Madison Avenue, New York 16, N.Y.*

an efficient wool dyeing auxiliary and

leveling agent

ANTHOMINE®

Anthomine achieves a full shade in dyeing tippy and blended wool.

Thousands of pounds of Anthomine have enabled U.S. and Canadian mills, in the past ten years, to meet rigid government specifications in the dyeing of wool for military fabrics.

It possesses good softening qualities, leaving the wool with a very pleasing, rich hand, of special value in strong acid dyeing which otherwise would harshen the fibers.

Anthomine also provides excellent exhaustion of the dyebath and speeds up dyeing operation.

Because of its cationic nature, many mills add Anthomine to wool oil to eliminate static on the cards.

Ask your Arkansas representative for full details, or write for Technical Service Bulletin.

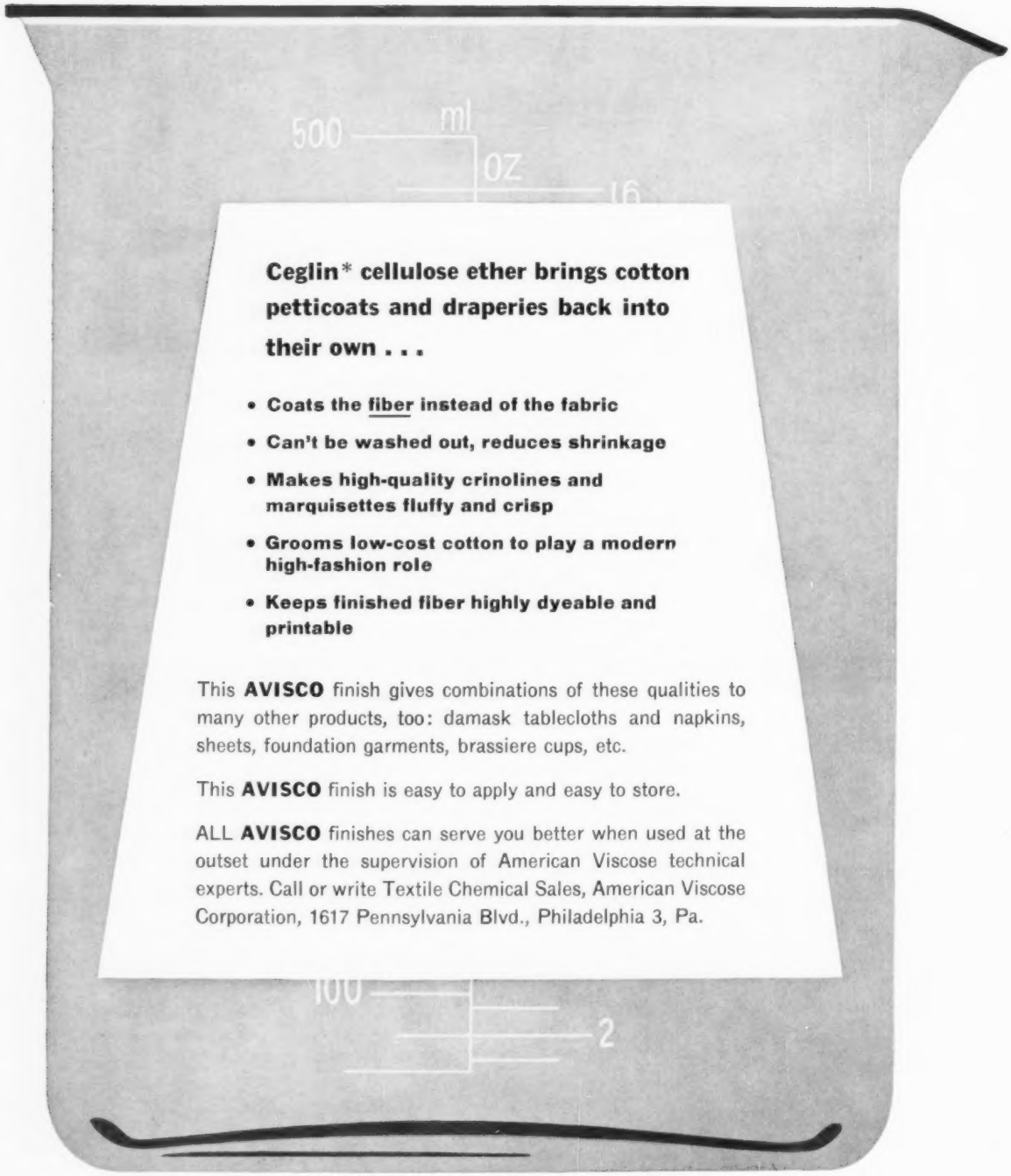
AC INC.®

ARKANSAS CO., INC.

Serving the Textile Industry for over 50 Years

NEWARK, NEW JERSEY

AVISCO* finish "fines



Ceglin* cellulose ether brings cotton petticoats and draperies back into their own . . .

- **Coats the fiber instead of the fabric**
- **Can't be washed out, reduces shrinkage**
- **Makes high-quality crinolines and marquisettes fluffy and crisp**
- **Grooms low-cost cotton to play a modern high-fashion role**
- **Keeps finished fiber highly dyeable and printable**

This **AVISCO** finish gives combinations of these qualities to many other products, too: damask tablecloths and napkins, sheets, foundation garments, brassiere cups, etc.

This **AVISCO** finish is easy to apply and easy to store.

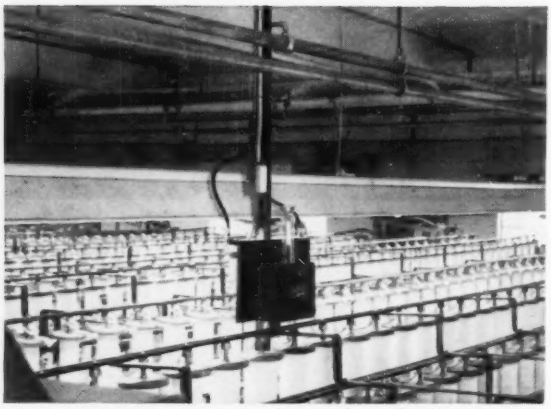
ALL **AVISCO** finishes can serve you better when used at the outset under the supervision of American Viscose technical experts. Call or write Textile Chemical Sales, American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

GROW WITH AVISCO*

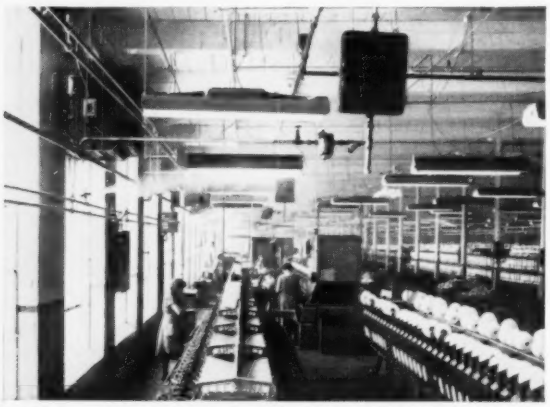
and sheers" cotton for keeps

*Avisco and Ceglin are trademarks of the American Viscose Corp.

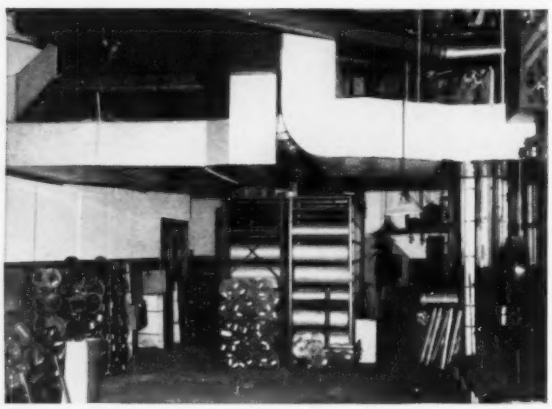
TEXTILE CHEMICALS



AMCO Humidification System installed at Caron Spinning Company, Robesonia, Pa. The highly sensitive AMCO Cyclestat Control holds humidity within narrow limits.



AMCO Evaporative Cooling System in Texas Textile Mills, McKinney, Texas. Note window units which control mixture of fresh and recirculated air.

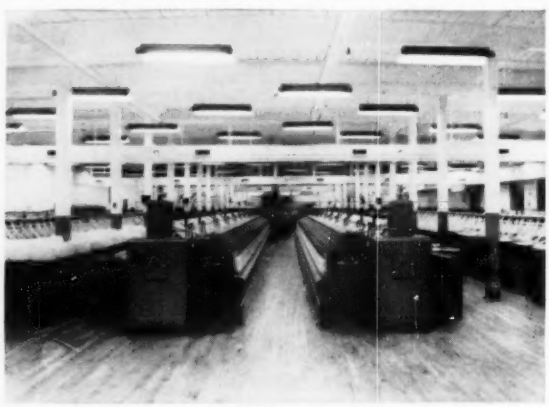


AMCO Unit Dry-Duct System at The Windsor Manufacturing Company, Philadelphia, Pa. The entire unit is installed overhead out of the way.

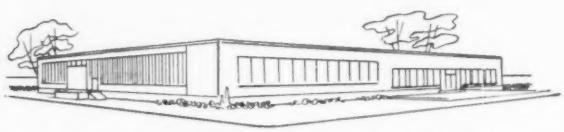
There's an AMCO AIR CONDITIONING SYSTEM designed for YOU!

When you think of air conditioning, remember that AMCO offers systems and equipment for every manufacturing requirement and every climatic condition. There are four different types of AMCO systems, alone or in combination: humidification, evaporative cooling, unit dry-duct, or central station air conditioning. And because AMCO engineers have these four basic systems — plus all associated equipment and controls — they are able to offer you unbiased advice on the *best* system for your particular need.

If you want the facts about textile mill air conditioning, with the advantages and limitations of each system detailed, as well as answers to such questions as cost, adaptability, capacity, maintenance and operating expense, write for AMCO's booklet, "AIR CONDITIONING for the TEXTILE INDUSTRY". Or better still, ask AMCO to recommend, without obligation, the system best suited to your mill.



AMCO Central Station Air Conditioning in the Roving Dept., Highland Park Mills, Charlotte, N. C. This is AMCO's highly efficient split-system.



New Cleveland-Rowan Plant of the American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

AMCO

AIR CONDITIONING SYSTEMS since 1888

AMERICAN MOISTENING COMPANY, CLEVELAND, NORTH CAROLINA • ATLANTA, GA. • BOSTON, MASS. • CAMDEN, N. J. • PROVIDENCE, R. I.

Which twin is more toney?

We've stumped the experts!

Compare fabrics made with cotton and Cupioni ... the sensational Bemberg* novelty yarn ... with fine, imported Douppioni silks. The amazing resemblance, which has fooled many veteran textile men, is just one reason for the meteoric success of Cupioni in fabrics for sport shirts, dresses, blouses, and sportswear.

The rest of the success story is based on the phenomenal practical qualities of the cotton and Cupioni fabrics . . . their foolproof washability, crease resistance, and serviceability.

Cupioni is but one of the many Bemberg novelty yarns. Equally promising are Nub-lite†, Strata Slub, Spun Plied Flake, Dream Slub, and many other novelty effects. And Bemberg in regular filaments in combination with other fibers, natural and man-made, is well worth looking into.

If you've got the pioneering spirit, we've got a handful of opportunities.

Bemberg®

"ARISTOCRAT OF MAN-MADE YARNS"

*rayon
†Reg. App. for

AMERICAN BEMBERG • Main Office: 261 Fifth Avenue, New York 16, N.Y. • Plant: Elizabethton, Tennessee

Automatic Winders for Rewound Filling

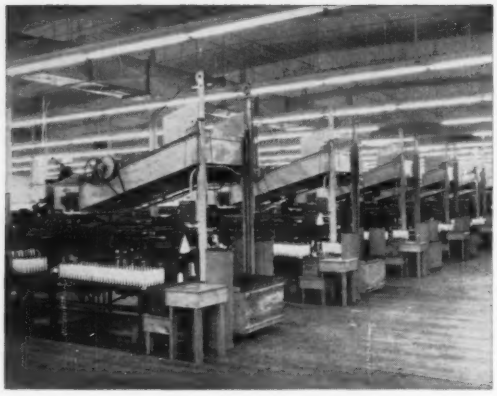
to take advantage of large package spinning, more yarn on filling bobbins, more uniform bunches, better weaving bobbins, and inspected yarn, all of which go to make a better fabric.

Abbott Traveling Spindle Package Winders

Automatic Cone or Tube Winders for warping, dyeing, twisting, quilling, sales.

Can be equipped with any one of a variety of slub catchers and inspection devices.

Production up to 1000 bobbins per hour per operator.



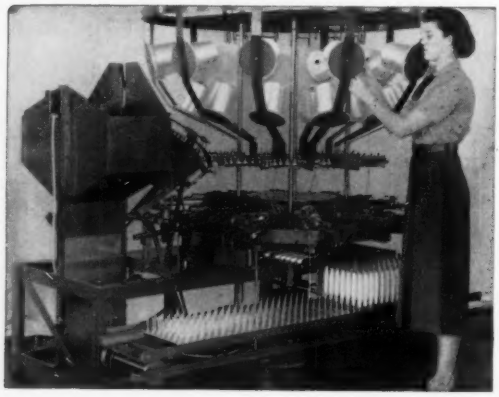
Abbott Traveling Spindle Automatic Quillers

For winding cotton, spun rayon, worsted, etc., equipped to doff automatically into baskets, or stack automatically into boxes.

For rewinding woolen yarn from mule and ring frames.

For winding filament rayon and nylon, etc., with automatic pinboard attachment or wide belt inspection conveyor.

Production up to 2500 bobbins per hour per operator.



Abbott Fully Automatic Radial Quiller

For smaller lots and widely diversified mills.

For winding cotton, spun rayon, filament rayon, worsted, wool, etc.

Can be arranged to deliver bobbins to Pinboard Attachment, or into baskets, or into wide belt conveyor.

One operator can run several machines producing up to 2000 bobbins per hour per operator.

Can be equipped with measured yardage device for two-shuttle looms.

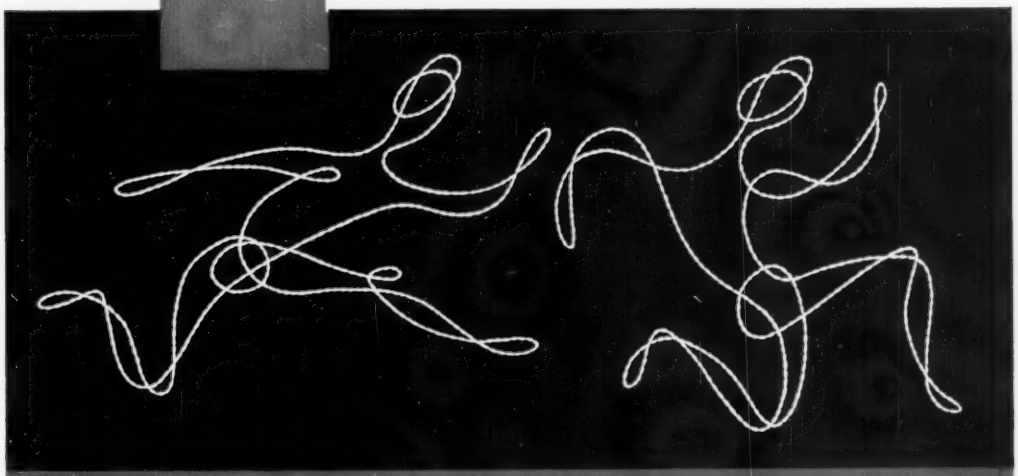
ABBOTT MACHINE CO., INC.

WILTON, NEW HAMPSHIRE

SOUTHERN SALES AND SERVICE: GREENVILLE, S. C.

32 million yard dash!

Q. How do you break speed records without breaking yarn?



A. Use IRC Continuous Process Rayon—unblemished by human hands!

Coming in on the beam are 32 million yards* of IRC Continuous Process rayon that could easily fly right through your loom without stopping for a break.

The reason: unequalled uniformity, particularly in the twist. Big cause of broken filaments, slack twist, is practically unheard of in IRC Continuous Process rayon. And knots are few and yarn-miles between. In fact, mile after mile, it's perfect inch by inch.

It's 100% impossible for anyone's hands to damage this rayon while it's spun—they never touch it!

You'd think from the low cost that it was just *any* rayon—but this is the same yarn weavers of the most critical fabrics insist on! Give your looms a break instead of a breakdown—specify Continuous Process rayon.

*A typical beam of 150 denier yarn has 700 strands, each approximately 46,000 yards long. It adds up to over 32 million yards.

I·R·C

INDUSTRIAL RAYON CORPORATION
CLEVELAND, OHIO

Producers of Continuous Process Rayon Yarns, Tyron® Cord for Tires and The New Nylon Staple Fiber
Sales Offices: 500 Fifth Avenue, New York 36, N. Y.
437 Guilford Bldg., Greensboro, N. C.

DISSOLVING WOOD CELLULOSE

"Acetacell"

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"Tenacell"

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Quality — Uniformity — Reliability

RIORDON

SALES CORPORATION LIMITED

SUN LIFE BUILDING **MONTREAL, QUE., CANADA**

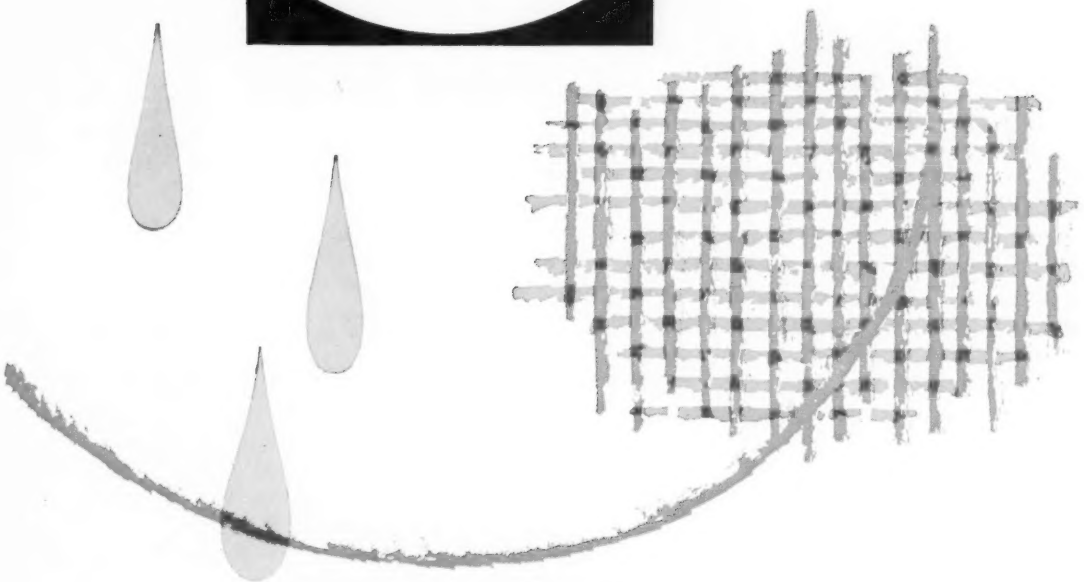
AND

220 EAST 42nd ST. **NEW YORK, N. Y., U. S. A.**

spotlight on

oxidation stability

in oleic acid



how Emersol Elaine eliminated uneven dyeing fault of a fiber lubricant

If you have a problem involving a "breakdown" or "change" in your products induced by aging or oxidation, then this customer experience will be of interest: *Case History No. 27-31 . . . The difficulties of uneven dyeing of yarns and fabrics in a textile mill precipitated a thorough investigation of all variables. The trouble was traced to this manufacturer's fiber lubricant which oxidized on the yarns. This led to only partial "oil" removal in scouring, which left sufficient residue to prevent uniform penetration of the dye.*

Since oleic acid was a constituent in this manufacturer's lubricant, a study of oxidation stabilities of double-distilled oleic acids from different producers was undertaken. Laboratory results showed that Emersol 221 White Elaine exhibited superior oxidation stability, and when substituted in his regular production, eliminated all previous dyeing difficulties.

This experience serves only as an example of the benefits derived from the outstanding oxidation stability of Emersol Oleic Acids. When this is added to their excellent color stability and resistance to rancidity, you get an unmatched combination that will make your products better, more appealing, and stay that way longer . . . and all at no extra cost. So, if you are not already benefiting from the Emersol Elaines, buy your next, and all oleic acid requirements from Emery.

Write Dept. MT-8 for 20 page brochure titled "Emersol Oleic Acids."

Emery

Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio

New York; Philadelphia; Lowell, Mass.; Chicago; San Francisco; Cleveland; Ecclestone Chemical Co., Detroit
Warehouse stocks also in St. Louis, Buffalo, Baltimore, and Los Angeles
Export: Carew Tower, Cincinnati 2, Ohio

Want a fiber that dyes well?

check VEREL

the new Eastman modified acrylic

After you've looked into all the special properties of a new fiber, is there still one last basic requirement? Must it be easy to dye and especially color fast? Then you'll like what you hear about VEREL, the new Eastman modified acrylic.

No special dyeing techniques required. VEREL offers no unusual dyeing problems. Because of its inherent whiteness, VEREL does not ordinarily require bleaching; however, it reacts well to commonly used agents. It can be dyed in all forms . . . raw stock, skein or piece goods.

Available dyes work well. Classes of dyes that may be used include neutral dyeing, pre-metallized dyes, dispersed or acetate dyes, neutral-dyeing acid dyes and, in some cases, the cationic or basic dyes.

Superior light and wash-fastness with selected dyes. VEREL may be dyed to produce results that are superior to those obtained with any other acrylic-type fiber, using any dyes available.

But a talent for dyeing well is only one of the many useful properties of VEREL. Luxurious softness, excellent dimensional stability, good wrinkle recovery, crease retention and low pilling tendency all help make VEREL particularly good for certain end uses. If you have a special job to do, ask your nearest Eastman representative for the full story on VEREL, *the fiber that fits the job.*

EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, 260 MADISON AVENUE, NEW YORK 16, N.Y.

MODERN
TEXTILES MAGAZINE

August, 1956
Volume 37 Number 8

Publisher's Viewpoint

The Perkin Centennial and the Man-Made Fibers Industry

This issue of MODERN TEXTILES MAGAZINE salutes with warmth and deep affection the synthetic dyestuffs industry and the centennial celebration in honor of Sir William Perkin, discoverer of the first synthetic dye. Next month for an entire week, the dyestuffs industry will be joined by an impressive roster of learned societies, scientific groups and industrial associations in a convocation to honor the man whose technical skill as a chemist and genius in research led to the creation of a whole new group of industries. Elsewhere in this issue, the reader will find a full account of the achievements of Sir William Perkin and the evolution of the dyestuffs industry. Also presented is an advance program of the Centennial Celebration.

The series of meetings, forums, lectures and panels discussions at the Waldorf-Astoria in New York City during the week of September 10th will honor Perkin in a way fully in harmony with the true spirit of science. He will be honored by the public airing of scientific knowledge, by the free and generous interchange of opinion and fresh insights among some of the world's leading scientists. The Perkin Centennial thus will be truly a feast of knowledge, the kind of feast that does most credit to the great work of Perkin and the men who followed him in creating the dyestuffs and allied industries.

This magazine is dedicated to the man-made fibers industry and extends its editorial coverage to the production and usage of man-made fibers in the 100% form and in blends. Because of this dedication to the man-made fibers industry, we feel more than ordinarily close to the synthetic dyestuffs industry. It is a fact that the development of man-made fibers has been closely connected over the years with the industry that has improved the synthesizing of dyestuffs. At the Perkin Centennial, the close connection of the dyestuff industry with the man-made fibers industry will be pointed up in an appropriately dramatic fashion by a special exhibit devoted to man-made fibers and fabrics.

Just as they have a closely intermeshed history, so the synthetic dyestuffs and the man-made fibers industries have great areas of common interest today. Although the uses of dyestuffs are by no means confined to fabrics, the coloration of fabrics is one of the most important applications of synthetic dyes, and one of the biggest markets for the manufacturers of these dyes. And the textile manufacturing industry depends upon the makers of synthetic dyes to provide them with the brilliant tints which, probably more than any other single factor, make fabrics attractive and in demand by consumers.

Thus it is overwhelmingly apparent that the textiles industry is married in an indissoluble union to the dyestuffs industry. It is fitting, therefore, for the entire textile industry to join the dyestuffs industry in the celebration in honor of Sir William Perkin. The Perkin Centennial next month is an event of equal significance to the textile as it is to the dyestuffs industry.

A. H. McCullough

PUBLISHER

OUTLOOK IN TEXTILE MARKETING

By ROBERT C. SHOOK, Textile Economist

Textile Revival Later This Year?

The textile industry is subject to its own peculiar cycle, as well as to the general business atmosphere in which it operates. Conditions for the industry appear to be more favorable for later this year and into 1957 than they have been for some time.

Past history in this industry, as in others, indicates that many new products are developed during periods of adversity. The leaders in the industry usually respond to bad times by redoubling their efforts. Nevertheless, it also helps textiles if general conditions permit a somewhat better reward for initiative, with an improvement in profit showings for the industry.

Inventories Have Been Liquidated—The textile cycle, as measured by fiber consumption, industry sales, and even its profits, is pronounced and fairly regular. Usually the period of inventory accumulation and liquidation lasts about two years, from trough to trough, or peak to peak.

In the fourth quarter of last year and the first quarter of this year, textile activity was sustained by a substantial backlog of orders. An early Easter, as well as the new Minimum Wage Law, had produced a substantial distortion in the usual seasonal pattern of buying.

The effects of poor selling weather during the Spring season have already been recognized. Production curtailment gained momentum during the second quarter. At the retail level, on the other hand, sales began to pick up somewhat in May and made a comparatively favorable showing in June. For several months now, a liquidation of textile inventories has been taking place, and continued through the July vacation period.

Meanwhile, general business activity, which had been well maintained during the early part of the year, now has an unavoidable excuse in the steel strike to show a more than seasonal letdown this Summer. Fears have been, and will be, expressed that a pro-longed strike may touch off a major recession in business activity. Experiences in 1949 and 1952, however, suggest that a lengthy strike has the effect of stimulating the rebound which follows.

General Business and Textile Cycles Coincide?—From the viewpoint of textile marketing, it should be encouraging that the textile cycle, and the general business cycle, will both be hitting their low points for the year at just about the same time.

With an early Easter and poor Spring weather, retailers cut back substantially on reorders, and have approached the fall season in a conservative manner. Retail inventories in relation to sales increased last Spring above planned levels, but there was no speculative accumulation such as has occurred in some other cycles. On the contrary, financial managers have been firm in insisting on getting stock-sales ratios back to normal levels before loosening up on budgets.

Stocks Are Believed Low—Late figures are not available. But stock-sales ratios generally are headed downward at the retail level. It is safe to estimate that by the end of August they will be back to or below conservative levels.

Most cutters have followed the same conservative policy, refusing to carry fabric inventories on a speculative basis. At the mill and converter level, a steady reduction in fabric inventory has been taking place during the past several months.

Delivery difficulties are almost traditional in a retail operation. The retailer samples new lines, and tests their sales appeal. When sales appeal is established, there is usually a rush to get more merchandise, and considerable difficulty in doing so.

Such developments are nothing new in textile industry. Nevertheless, it seems safe to estimate that the delivery problem will be somewhat more general and more serious during the coming fall season than a year ago. Such a development is usually reflected in the following season in a more liberal buying policy by retailers.

Castle Creek's Percarpio

Frank Percarpio's story proves that all you need to succeed in the hard-pressed dyeing trade today is a touch of business genius, a devotion to the newest and best equipment and a brain packed with rare dyeing skill.

He's dyeing to make good

By Jerome Campbell
Editor, MODERN TEXTILES MAGAZINE

BACK IN 1945, the dyeing business was good among the small plants scattered about northern New Jersey, an hour or less from Manhattan's Seventh Avenue, that throbbing main artery of the fashion industry. Commission dyeing plants, many of which were equipped with old-fashioned, worn-out uneconomic machinery, had been doing well in the years of wartime textiles boom. In fact, for many of these plants the rush of wartime business had saved them from extinction.

One of the best of these New Jersey plants in point of equipment and an able management which was insistent, despite the easy wartime atmosphere, on high quality work, was Chadwick Screen Printing Company owned by Frank Percarpio and the brothers Albert and Harry Uberti. They had started the business in 1940, establishing themselves in a building on Keen Street in Paterson which had formerly housed the defunct General Piece Dye Works.

Frank Percarpio, although he was only 32 when Chadwick started up, was a seasoned veteran of the dyeing business. He had been running dyeing and printing plants ever since he was 22. He had found time in those years to master the essential theoretical aspects of dyeing by studying chemistry in two intensive years of night work at Columbia. Earlier, he had equipped himself for a career that was to combine technical knowledge of dyeing with greater and greater responsibilities in overall management by studying business administration for three years at New York University.

At the Chadwick plant right from the beginning, Percarpio found ample opportunity to combine all his skills and training. Working 12 to 14 hours a day six days a week, he functioned as colorist, as manager of the plant and as chief salesman. Business was good for the firm which specialized in table cloth printing; earnings were also highly satisfactory, and the three partners rejoiced at the heartening flow of profits and the steady growth of their business. The year 1945 was the best since they had gone into business, and the Uberti brothers saw no reason why things should not continue in this way.

But Frank Percarpio had different ideas. He read the papers in early 1945, and like many others, he could see that the war was coming to an end, and he suspected that the end was not far off. With the end of the war would come the end of a period when virtually anyone with a dyeing or finishing plant could make money. For a printer and dyer who was able to see beyond the day after tomorrow the time had come, Percarpio told himself, to think about the way the dyeing business would function in the future.

He rightly guessed that in the postwar future, the successful dyer would be the one who was equipped to do business under conditions of rigorous competition. And he reached the conclusion that such condi-

(Continued on page 46)

In Celanese's New York showroom, home economics teachers study a young model demonstrating a Paris creation while fashion coordinator Norma Geer (extreme right) talks about the role of French fashions in the American textile industry

Teachers' seminar makes hit

"We learned" participants say. Ask for repeat every year

STAFF PREPARED

KEEN INTEREST, warm appreciation and a conviction that their teaching skills had been greatly improved were the major reactions of 50 home economics teachers who participated in a textile industry seminar, July 2-5. The first of its kind ever held, the seminar was sponsored jointly by four producers of man-made fibers.

Teachers and extension work specialists from 30 states, Hawaii and Brazil who attended the seminar summed up its value almost unanimously by saying that it gave them a "behind-the-scenes" understanding of how the textile industry makes and markets fabrics.

They said that the seminar brought them a deeper understanding of the problems of yarn producers and the complexities of processing textile materials from fiber to finished garments. Many of the participating educators declared that the things they had learned would enable them to teach more effectively in colleges and extension work.

At Marcus Hook, John M. Roughan of American Viscose's Textile Research Dept. explains a step in yarn spinning to home economics teachers

Sponsors of the seminar were American Viscose Corp., Celanese Corp of America, the DuPont Co. and Eastman Chemical Products, Inc.

Along with their conviction that the content of the seminar was valuable to them as teachers, the participants were warm in their praise of the smooth, coordinated way the seminar was organized. They were also markedly appreciative of the informal, friendly atmosphere created for the seminar by fiber producers' representatives and the hospitable way in which the seminar's sponsors entertained them.

Here is a cross section of opinions about the seminar voiced by a sampling of participants:

Mrs. Ruth Snoddy, teacher of textiles and clothing, University of Oklahoma: "The seminar was particularly valuable in that it enabled us to see and understand some of the problems facing fiber producers, mills and garment manufacturers in their efforts to keep up quality of textile end products. I am returning to my classes with a better understanding of what the textile industry is doing to please consumers. And I shall try to pass this information along to my students."

Mrs. Snoddy expressed the view that yearly repetition of the seminar would be valuable, but that each year a different group of teachers should be invited so as to get the greatest exposure to the seminar among home economics teachers.

Miss Marilyn Archer, teacher of textiles, University of Maryland: "My understanding of the textile industry has been greatly deepened by attendance at the seminar. It has given me, in particular, a better appreciation of what fiber producers are doing to improve fabrics."

Miss Archer liked the way the seminar was organized to give useful, detailed information about textile manufacturing to the participating teachers. She said that she had absorbed a great deal of valuable information to take home, digest and use in her teaching work.

Miss Mayme Powell, teacher of clothing and textiles at Tuskegee Institute, Ala., said that she found the seminar would enable her to give her students a better understanding of all the elements that go into a dress.

Miss Ida Heywood, University of Utah, found the seminar notably helpful in revealing to her at first hand the extent of research carried on by fiber producers to improve textile products. What she had learned at the seminar, she declared, would enable her better to explain fabric manufacturing to her students.

Miss Verna Moulton, University of Connecticut, stated that the seminar was the best of its kind she had ever attended. To Miss Moulton the seminar was particularly helpful in that it gave her a greater knowledge of "behind-the-scenes" activity in textile manufacturing.

Dr. Graham Hard, clothing specialist of the Texas Agricultural Extension Service, said the seminar provided informative insights into what the textile industry is doing to meet consumers' needs. She expressed the opinion that, in the future, the content of the seminar might be improved by directing it more specifically toward interests of consumers who

(Continued on page 61)

Ornamentation of apparel fabrics

A NEW SERIES

SPOT DESIGNS

The author's first series on fabric ornamentation were widely read and warmly praised. We have been bombarded with requests for more of these pieces. Here they are

By Victor Lobl

WITH THE present article we continue our discussion of simple spot weaves. The first installment on this subject appeared in the February 1955 issue of this magazine. In consideration of the readers who may have no occasion to refer to that article and with the indulgence of those who have, we think it beneficial to review briefly the important points of the preceding chapters. This is what has been discussed thus far:

Spot designs are a subdivision of the large and varied family of figure weaves. These types of designs are used repeatedly in the production of fancy cotton and rayon fabrics. A great many novel arrangements that range from the small diamond or rectangular spots to the large and elaborate pictorial designs are possible. The peculiar characteristic of these designs is that the ornamentation consists mainly of detached spots or figures which are appropriately distributed on a ground weave base. The decoration here is created by the weave design and not by the color although contrasting shades or materials of different lustre in warp and filling may add to the prominence of the figure.

In describing a spot design we distinguish four major classifications:

1. Spot effects formed by means of but one system of warp and filling. (Fig. 74) The important characteristic of this type of design is that the figure is a part of the body construction and that it is produced by floating the regular warp or filling or both the warp and the filling on the face of the cloth in contrast to the ground weave. As indicated by the foregoing description this major group may be further subdivided:

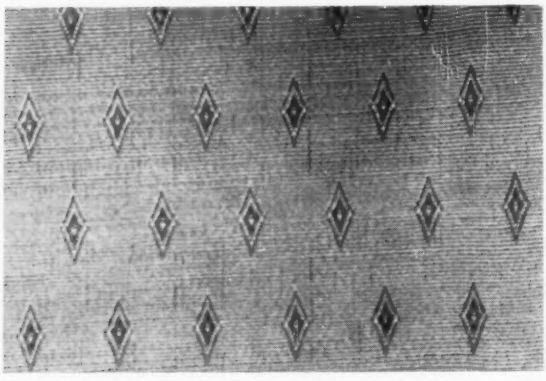


Fig. 74—Typical example of Spot Weave discussed here. The corresponding design is shown in Fig. 75-A.

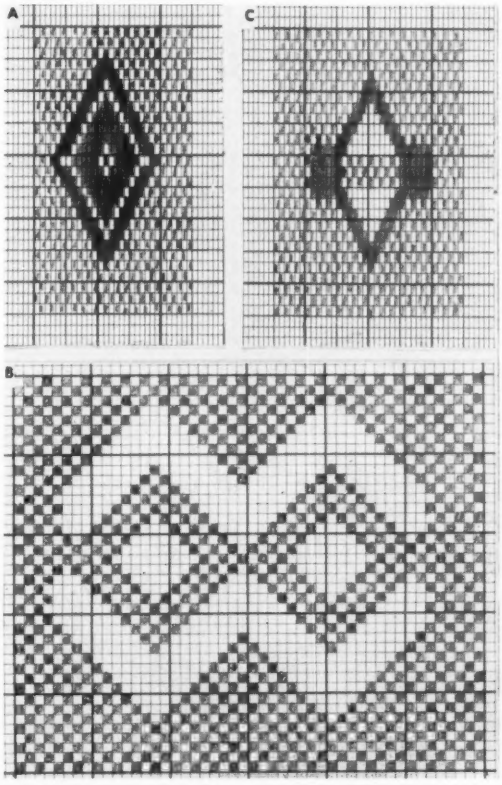


Fig. 75-A—Warp Spot. Fig. 75-B—Filling Spot.
Fig. 75-C—Combination Spot.

a.) *Warp spots*, which are produced by adding raisers to the ground weave, (Fig. 75-A).

b.) *Filling spots*, which are obtained by removing points of interlacings, thereby allowing the picks to pass over the ends as required by the motif. (Fig. 75-B)

c.) *Combination spots*, which as the title implies, is a mixture of both warp and filling floats in the same motif. (Fig. 75-C)

2. Spots formed by an extra system of warp yarn. These ends are entered into the cloth from a separate beam (top beam) strictly to produce the decorative design over a portion of the fabric. (Fig. 76) Fig. 76-A shows the back of such a fabric and illustrates how the extra yarn between the spots appears before and after shearing.

3. Spots obtained by means of extra filling. These are, in most cases, small dot effects. The extra filling

(Continued on page 63)

Part 4

THREE-COMPONENT BLENDS

By James F. Sayre

INTRODUCTION of a third component to a two-component blend adds scope to the concept of engineered blends. Fabric characteristics may be modified through further refinement in the application of complimentary characteristics of individual fibers. On the basis of the blends studied, however, addition of a third component was no guarantee of a fabric with enhanced over-all characteristics. As might be expected, proper engineering of the blend was at least as critical as in a two-component blend. Many of the blends studied appeared to offer little of practical interest except in the illumination cast upon fiber properties in blends.

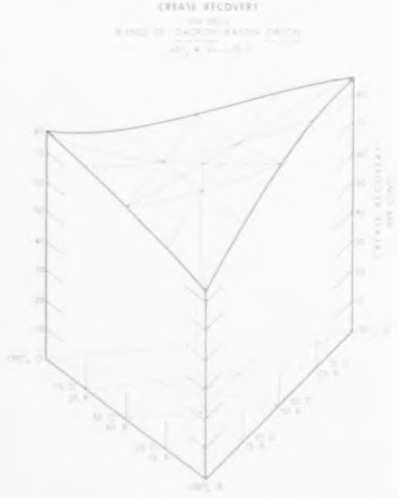


Fig. 1

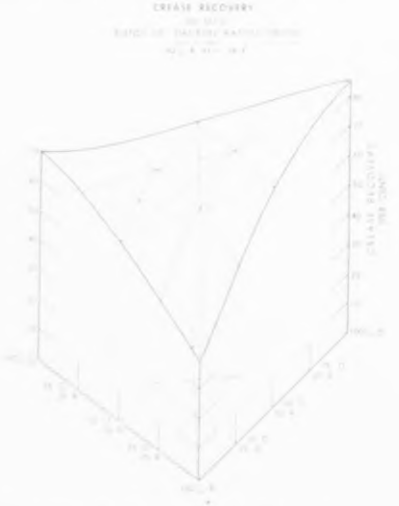


Fig. 2

While a blend of Dacron polyester fiber, Orlon acrylic fiber, and rayon exhibited characteristics of interest, blends of Dacron, rayon, and acetate, and of Dacron, Orlon, and acetate, did not exhibit over-all combinations of characteristics which would recommend them over optimum two-component blends of Dacron and rayon or Dacron and Orlon.

Blends of Dacron, rayon, and Orlon

Blends of Dacron, rayon, and Orlon in general reflected the relationships shown by the control fabrics and the two-component blends of these three fibers insofar as crease recovery was concerned. At 65% relative humidity, blends of the three fibers containing major amounts of rayon and very small amounts of Dacron—less than approximately 25%—had relatively low values of crease recovery. For a fixed amount of Dacron polyester fiber in excess of approximately 25%, the content of Orlon acrylic fiber and rayon could be varied from one limit to the other without causing pronounced effects upon crease recovery. No matter what proportions of rayon and Orlon were used in the blends, however, increased amounts of Dacron produced increases in crease recovery. Roughly 50% or more of Dacron was required in three-component blends of Dacron, rayon, and Orlon to obtain fabrics having crease recovery values significantly greater than those of the control fabric of 100% Orlon.

At 90% relative humidity, the pronounced sensitivity of rayon to changes in humidity was evident in all the blends containing rayon. Blends of Dacron, rayon, and Orlon containing approximately 40% or more rayon had significant losses in crease recovery because of the increased humidity. Dacron was more effective than Orlon in stabilizing the crease recoveries of these blends. This was shown by the fact that, for a given amount of rayon in the blends, those blends containing the most Dacron, as compared with Orlon, showed the smallest loss of crease recovery caused by the increase in humidity (Figures 1 and 2).

As was done in the case of crease recovery, for any given three fibers, the concept of a three-dimensional model can be employed to give a composite picture of the effect of each fiber on the abrasion resistance of any two- or three-component blend. A drawing of such a model is given in Figure 3, which illustrates the abrasion resistance of every conceivable fabric containing Dacron, Orlon acrylic fiber, and rayon. The pronounced resistance to abrasion characteristic of Dacron polyester fiber contrasts sharply with that of Orlon and rayon. As would be expected, rayon showed a greater loss in abrasion resistance when tested wet than did the hydrophobic fibers.

The relationship of tongue-tear strength to composition for all blends of Dacron, rayon, and Orlon is illustrated in Figure 4. The greater tear strength of Dacron in contrast with the strength of Orlon and rayon is obvious. Also readily apparent is the prac-

(Continued on page 62)

Glowing with appeal
by National Aniline Dyes
This year soft goods have an unusual opportunity to win a larger share of the consumer dollar. As never before, fashion-right colors can provide a powerful stimulus to textile volume. Nothing else adds so much sales appeal . . . so much visible evidence of value for so little.
Anticipating the trend, we have added many new colors to our lines; have intensified Technical Service activities and application research on new fibers and blends and have streamlined sales office, warehousing and delivery services.
Better than ever before, National stands ready to help you get your share of growing soft-goods markets by better use of better color on better fabrics. More than ever before it pays to call National Aniline *first*.
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Mothers welcome boys' wear with built-in wash 'n' wear!

Wash 'n' wear properties in the new easy-care clothes made with Du Pont fibers last the life of the garments

Wash 'n' wear boys' wear made with "Dacron"* polyester fiber, "Orlon"** acrylic fiber and Du Pont nylon has been enthusiastically welcomed by mothers all over the country! These handsome clothes save busy mothers time, work and money . . . because the easy-care advantages of wash 'n' wear are built right into the fabric.

A recent nation-wide survey on wash 'n' wear slacks of 65% "Dacron" and 35% rayon shows:

- **The chief reasons for buying were *washability*, appearance and durability!**
- **More than 80% said these wash 'n' wear slacks had superior wrinkle resistance and shape retention.**
- **And nearly 60% *traded up* to get the benefits of wash 'n' wear in these slacks.**
- **More than 94% of the 661 consumers answering the questionnaire said they would *rebuy* wash 'n' wear slacks made with "Dacron".**

The *built-in* wash 'n' wear advantages provided by Du Pont fibers appeal to today's busy, modern-living mothers. To help sell this new concept, Du Pont will run a year-long advertising campaign reaching millions of mothers throughout 1957.

Right now why not ask yourself this important question: *Are my 1957 plans for wash 'n' wear fabrics big enough to meet the great and growing demand?*

Wash 'n' Wear

built-in with

DACRON

REG. U. S. PAT. OFF.

ORLON

REG. U. S. PAT. OFF.

NYLON

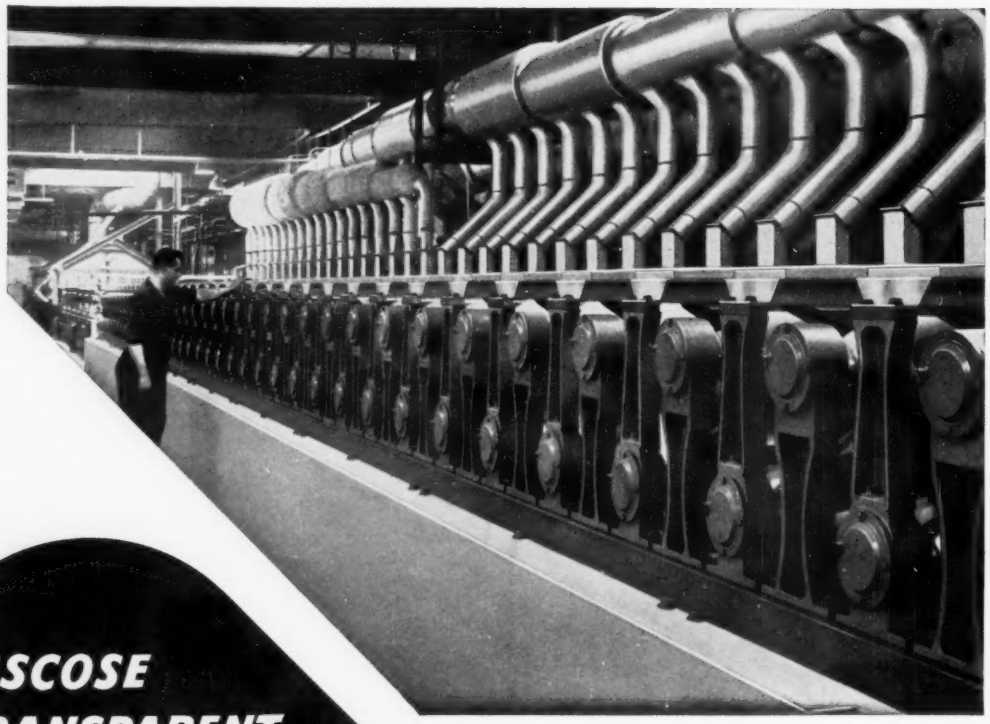
DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

*"Dacron" is Du Pont's registered trademark for its polyester fiber.
**"Orlon" is Du Pont's registered trademark for its acrylic fiber.
Du Pont makes fibers, not the fabrics or garments shown here.

Photograph by courtesy of Transparent Paper Limited, Bury



VISCOSE TRANSPARENT *film . . .* at 5 feet a second

INCREASED PRODUCTION

Designed and manufactured in close collaboration with the industry, Dobson & Barlow's new Viscose Transparent Film Machine, shown here in operation, produces 59" wide film in 1,000 lb. finished reels at 300 feet per minute. A number of these machines are being supplied to the Bridge Hall Mill of Transparent Paper Limited, Bury, for their re-equipment programme. These high production figures are made possible by 8-pass treatment tanks, greatly accelerated cylinder drying and improved reel tensioning.

IMPROVED QUALITY WITHOUT WASTE

Specially prepared roller surfaces, a new drying system and the careful attention given to the finish of all contact parts ensure exceptionally smooth film of regular thickness, and virtually no waste.

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An oil-immersed gear box drive to each treatment tank, better glanding of rollers, protection against corrosion, and general machine accessibility make definite economies in maintenance costs.

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for the dyer and finisher

Nylon Emulsion Bonding Agent

Belding Corticelli Industries, Inc. has started production of a new nylon emulsion bonding, coating and finishing agent proved suitable for the textile, paper and rubber industries. The product, called BCI nylon dispersion, is manufactured from Type 8 resin under license from the Du Pont Co. Belding Corticelli reports that the emulsion may be applied by dip coating, roller, or by spraying with either a heat sealable thermoplastic or thermoset finish as desired.

According to the company, field tests have disclosed that the emulsion exhibits exceptional adhesive strength when used as a bonding or finishing agent on non-woven fabrics. The product is also said to give added abrasion resistance and tensile strength when used as a finish on woven or knitted fabrics.

New Oleic Acid Available

Emery Industries is offering a single-distilled oleic acid, Emersol 213 Low Titer Elaine. The new grade is said to be identical to the standard Emersol 211 Low Titer Elaine except for a lighter color as follows: Emersol 213: 5y/1R-10y/2R (1" Lovibond) and Emersol 211: 10y/3R-30y/6R (1" Lovibond). Both acids are equal in price.

New Green for Rayon Staple

Courtaulds (Ala.) Inc. announced the production of a new Apple Green replacing the old color in their Coloray range of solution-dyed rayon staple.

According to the company, Apple Green received the highest rating on the AATCC light fastness test which is Class L-8 (320 hours). Tests, however, were continued in southern Florida up to 500 hours without significant fading results, either in direct exposure or under glass. The old Apple Green color had a rating of 160 hours under glass and 80 hours on direct weathering exposure. The new Apple Green is also said to have shown considerable improvement in resistance to peroxide bleaching, perspiration, and in fastness to dry cleaning.

Wash-and-Wear Silicone

The Cravenette Co., Hoboken, N. J., has announced a silicone emulsion designed for use in wash-and-wear finishes. The product, Cravaco A. P. S., is said to be compatible with the various types of resins used in wash-and-wear finish formulations. According to the company, the emulsion increases abrasion resistance and tensile strength.

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LIQUID SULFUR DIOXIDE

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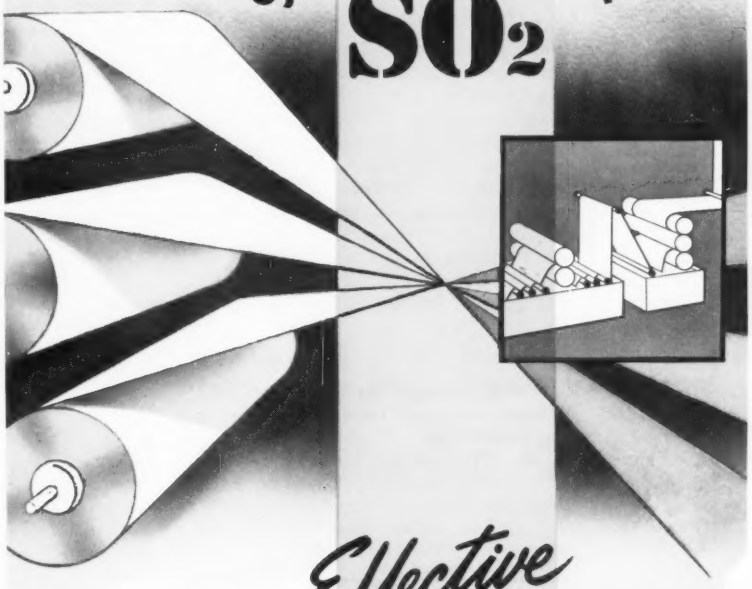

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Tennessee's liquid Sulfur Dioxide is a most efficient and economical antichlor. Removes residual chlorine and other materials which cause color reversion or yellowing with age. It also eliminates excessive residual chlorine in water.

Tennessee's Liquid Sulfur Dioxide practically 100% pure, is also very effective as a reducing, bleaching, and neutralizing agent, preservative and pH control.

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MILL TEST PROCEDURES

a new series on quality control

By Norbert L. Enrick*

More Tests for Better Spinning

Fifth in a Series

IN THIS SECOND PART on Spinning Test Procedures, the following test methods are described:

— Idle Spindles Check
— Yarn Twist Determination
— Yarn Twist Contraction in Spinning
— Yarn Single End Strength and Elongation.

As previously, the purpose, methods of sampling and testing, and evaluation and interpretation of the test results are covered in each procedure. However, a number of general comments are applicable concerning the choice of test method and the frequency schedules or testing cycles. These will be discussed now.

Idle Spindles Check

Performed at randomly selected hours of the mill week, this test will yield in a short time valuable data on general running conditions. From the test procedure, it is evident that this test can be performed at great speed, so that, on the average, it should take less than a minute to check each frame. While most mills perform this type of test on a weekly basis, a few utilize it as frequently as once a day. The test can be extended, where desired, to cover also idle spindles in roving and twisting. Also, where lap-back drawing is done, this operation can be included as an idle-deliveries check. A convenient recording form, suitable for mounting on a clip-board during idle spindelage checking, is illustrated in Fig. 10.

* Institute of Textile Technology, formerly with Werner Textile Consultants.

Werner Tex. Cons.

IDLE SPINDLES CHECK

| | | |

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Special fibers being developed to answer needs in Fashions, Home Furnishings, and Industry

1. ARNEL—the new Celanese ease-of-care triacetate fiber. Contributes great good looks to fabrics, plus machine washability, quick drying, little or no ironing. Fabrics of Arnel have an uncanny ability of resisting wrinkles and maximum shape retention. Used in all ready-to-wear.

2. ACETATE, the beauty fiber—the famous, beautiful fiber used for dress fabrics with elegant good looks. Combines with other fibers, notably cotton, for sportswear and year-round fabrics.

3. CELAPERM, the acetate yarn with "sealed-in" color—the rich, lustrous yarn with color sealed against streaking and washing out. Has captured bathing suit market, is woven with cotton for sportswear and children's clothes.

4. BULKED ACETATE—new bulked filament yarn now available in acetate or Celaperm. Important for new lofted look and dry, crisp hand of apparel and home furnishings fabrics.

5. CRYSTAL YARN—filament acetate yarn with high reflective power. Brilliant sparkle and firm hand make it important in party dresses, decorative fabrics.

6. QUILTICEL—the permanently bonded interlining made entirely of acetate. Does not lose its shape in washing, has warmth of comparable wool interlinings, resists moths and mildew, sews easily. Used in all quilted apparel.

7. FORTISAN—the super-strong rayon with great dimensional stability. Used for home furnishings sheers, and as a strength-giving warp yarn in textured decorative fabrics.

8. FORTISAN-36—a high denier super-strong rayon yarn developed especially for the industrial field, having high tensile strength, dimensional stability, and light weight. Mechanical rubber goods, plastic laminates, paper reinforcements.

9. RAYON—filament yarn, bright and dull luster, and continuous tow.

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CELANESE® CELAPERM® QUILTICEL® ARNEL® FORTISAN® FORTISAN®-36

Mill Test Procedures

(Continued from page 40)

clude these three steps in starting a new yarn count and twist:

a. Calculate the twist from engineering formulas, as furnished in the test procedures here.
b. Make a record of the front roll speeds and spindle speeds involved in the calculations above, and also find the ratio of the front roll to spindle speed. This will serve as a check-point for routine speed tests.
c. As a final safeguard, perform a "direct method" twist test. If the results from (a) and (c) do not check within 2%, there may be an error in performing the work or an error in the processing data compiled.

Yarn Single End Strength and Elongation

With the development of completely automatic machines for performing this previously tedious test, single-end determinations have been finding increasing favor over the skein strength determinations. However, rather than replace the skein strength test, it would seem preferable to perform both types of test, so as to be able to judge yarn quality from both a single-end strength and skein-strength viewpoint.

Increasing importance is placed upon yarn elongation. As a rule, cotton yarn elongation should be as high as possible. This will permit spinning a slightly coarser and therefore stronger yarn, and to compensate for this by using extra stretch in slashing. In this manner, as much as one to two percent extra yardage of yarn may be won, without the cost of spinning it. For many synthetics, however, which have an inherent elongation far greater than cotton, it is often desirable to keep elongation well below the attainable maximum, so as to avoid adverse effects on the stability of the yarn and fabric.

General

While it is evident that the types of tests to be performed in a routine quality control program in spinning are many, it is possible to keep the testing frequencies relatively low. However, the basis on which this is accomplished is the assurance that the testing in prior processing has been performed at regular and established frequencies, so that the stock fed into spinning can be relied upon as being uniform and controlled.

IDLE SPINDLES CHECK

Purpose

Performance of this test at various hours of the mill week will yield data on average running conditions, thereby aiding supervision in keeping idle deliveries at a minimum.

Procedure

Walk through the spinning room, observing and counting all the idle spindles by the types identified below:

TYPE	IDENTIFICATION
1. Creel Break	Roving broken between creel and back roll, but cause is not immediately apparent.
2. Mechanical	Stops for apron replacement or other maintenance.
3. Broken Tape	Spindle not running because of broken tape.
4. Run-out	Run-outs due to lack of supply in the creel or shortage of stock.
5. End Break	Roving broken below front roll.

Omit any frames or groups of spindles which are being held deliberately idle for routine scouring, for style change-overs, or in order to balance production with other departments.

Evaluation

Find the percent idle spindles by each of the five types above, for each group of frames on a particular yarn style. Usually, an idle spindelage in excess of 0.5% will indicate one or more of the following:

1. Improper servicing of the frame(s) by the operator(s).
2. Poor maintenance of tapes or rolls.
3. Substandard raw stock or poor processing settings.

The data accumulated on a weekly basis will yield valuable information for the control and reduction of idle spindles, thereby increasing overall machine efficiency.

YARN TWIST DETERMINATION

Purpose

Maintenance of desired quality or specified twists in singles yarn requires checking to assure that these twists are actually produced.

Procedure

Since a large number of tests and a high degree of skill and concentration are usually required for tests on a Twist Counter, it is preferable in a mill to determine twist from the following data of a spinning frame:

1. The diameter in inches and speed in RPM of the front roll.
2. The spindle RPM, designated as Spdle-RPM.
3. The ordinary twist contraction, or C, in percent.

This information is usually obtained in routine testing, by means of the separate test procedures furnished. Using these data, the twist in Turns-per-Inch is found from the formula:

$$\text{Turns-per-Inch} = \frac{\text{Spdle-RPM} \times (100\% + \text{C}\%)/100}{\text{FR Diam.} \times \text{FR-RPM} \times 3.142}$$

Where FR Diam. refers to the Front Roll Diameter in Inches, and 3.142 is the value of Pi used in converting Diameter to Circumference.

Example

As an illustration, assume a Front Roll Diameter of 1.25 inches, a Front Roll speed of 180 RPM, a Spindle RPM of 9,000 and a 5% Contraction. Then,

$$\text{Turns-per-Inch} = \frac{9{,}000 \times (100\% + 5\%)/100}{1.25 \times 180 \times 3.142} =$$

13.4 (rounded out).

Evaluation

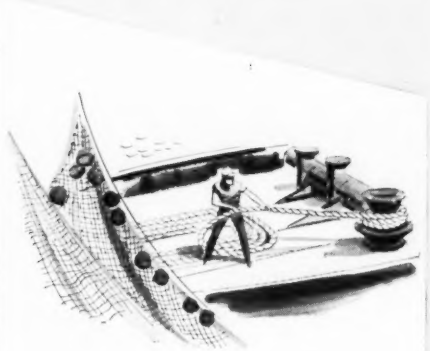
From the determination of actual Turns-per-Inch made, utilize the closest twist gear which will give the desired twist, and thereafter make a re-check.

So long as the Front Roll speed, Spindle Speed and Twist Contraction remain within ±3% of the closest twist gear setting, no further action is needed. However, when one of these items changes, corrective action is required.

(Continued on page 44)

Conveyor Belts

Webbing



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NYLON HEAVY YARNS

OFFER UNUSUAL TOUGHNESS AND LONG FLEX LIFE IN HEAVY-DUTY INDUSTRIAL FABRICS

Caprolan *tensile-tough* nylon heavy yarns (2000 denier and up) are a completely new yarn class that assures unusual durability and economical performance in such industrial products as duck, webbing, rope and similar constructions.

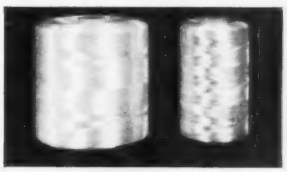
For heavy-duty applications, this new kind of nylon combines toughness, high impact strength, abrasion resistance, long flex life, and — for conveyor belts — excellent troughing qualities.

Where color is desired in nylon, Caprolan also offers a previously unavailable affinity for virtually any class of dyestuff, and can provide quality color rendition of dyes in shorter dye cycles.

Caprolan nylon heavy yarns eliminate the need to ply multiple ends of finer deniers to achieve a higher total effect. They can be engineered as high as 50,000 total denier, according to your specifications, and are put up on a new 30-lb. package as well as on 10-lb. packages.

You will want to look into such Caprolan economies as longer runs between creelings . . . ready dyeability . . . elimination of costly fine denier inventories . . . and the unusual and lasting whiteness of Caprolan that develops no appreciable yellowing in storage.

Caprolan heavy yarns already have been established in many leading mills. For more information or technical assistance, call or write us today.



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Mill Test Procedures

(Continued from page 42)

YARN TWIST CONTRACTION IN SPINNING

Purpose

In order to calculate production rates and twist multiples, the amount of yarn twist contraction during spinning needs to be ascertained.

Equipment

Revolution counter, attached to bottom front roll of frame; calipers or micrometer to measure diameter of bottom front roll.

Procedure

1. Stop the frame and mark the yarn just below the nip of the front roll.
2. Run the frame for twenty to thirty minutes. Read off the total revolutions of the roll.
3. Determine the *actual contracted yardage produced* during the run, by transferring it unto a yarn reel.
4. Determine the *uncontracted yardage delivered by the front roll* (prior to contraction during winding unto the bobbin) from the formula:
   Yards Delivered = FR Diam × FR Rev × 3.142/36
   where "FR Diam" denotes Front Roll Diameter in Inches, "Rev" denotes the total revolutions found from Step 2 above, 3.142 is the value of Pi to convert diameter to circumference, and the division by 36 changes inches into yards.
5. Find the twist contraction from the formula:

$$\text{Contraction } \% = 100\% - \frac{\text{Yardage from Step 3}}{\text{Yardage from Step 4}} \times 100$$

Evaluation

An average of five tests, taken over a period of one to two weeks, will usually give an adequate representation of the percentage of contraction which takes place between the delivery roll and the spinning spindle.

YARN SINGLE END STRENGTH AND ELONGATION

Purpose

It is generally recognized that single-end strength and elongation tests of yarn will often yield a better picture of actual yarn quality than skein tests. However, because only ten to twenty inches of single-end length are used in each individual determination, as against 120-yard lengths in a skein, it becomes quite costly to perform a comparable number of single-end tests. With the development of automatic testing machines, however, an increasing number of quality control laboratories are giving preference to single-end strength and elongation in evaluation of yarn quality.

Equipment

Automatic Yarn Strength Tester, Inclined Plane Type; Capacity 2000 grams and 40% elongation; Gauge length 50 cm or approximately 20 inches.

Sampling

Perform ten to twenty determinations per yarn package.

Procedure

1. Thread the yarn package in, set the tester for the desired number of breaks, and let it run until completion of the set.
2. The tester will record the individual strengths and elongations on each determination, the total strength and elongation, and the frequency distribution of the breaks.

Evaluation

1. Find the average strength and elongation by dividing the totals from step 2, above, by the number of breaks made.
2. Express strength in relative terms, such as Grams-per-Denier. Where yarn size is given in cotton system yarn number, find Grams-per-Denier from the formula:
   Grams-per-Denier = Grams × Yarn No./5315
3. Find the Average Range Percent or Coefficient of Variation from the frequency distribution of breaks.*

* For statistical procedure, see prior series on "Quality Control through Statistical Methods," now available in bound form through MODERN TEXTILES MAGAZINE.

Cyanamid to Build Acrylic Fiber Plant

After long deliberation, American Cyanamid Corp., has "definitely decided" to enter upon the "large scale commercial production" of its acrylic fiber tradenamed Creslan, according to an announcement by K. C. Towe, president. Construction will begin in December and it is expected that the plant will be in production by the second half of 1958.

Limited quantities of Creslan will be available from a pilot plant at Stamford, Conn., toward the end of 1956. Full scale marketing of Creslan will begin in the middle of 1958, according to present plans.

Mr. Towe said that a site in northern Florida had been tentatively selected for the new plant. It will have an annual productive capacity of 27 million pounds, staple and tow, with a 100% expansion potential embodied in the original plant design.

American Cyanamid is a large producer of acrylonitrile, basic material for acrylic fibers including Creslan. The company recently announced plans to expand production of acrylonitrile at its Fortier plant near New Orleans, La.

Celanese gives 24 knitters licenses for stop motion use

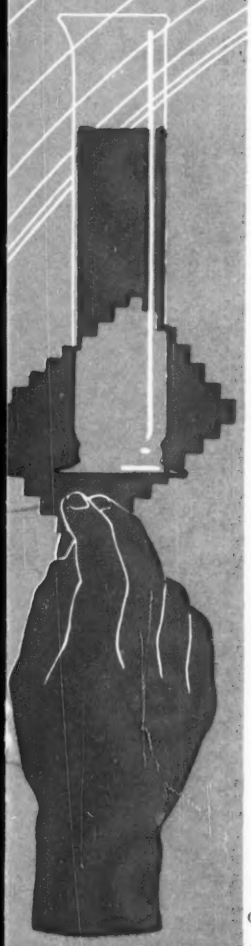
Celanese Corp. of America has given royalty-free licenses to 24 textile companies to use an electronic scanning device on warp knitting machines. Licenses issued by Celanese cover use of more than 700 individual scanning units. Present manufacturers of the devices are Photobell Sales Corp. and Watts Manufacturing Co.

Celanese has been issued two patents in addition to the one originally issued for the scanning unit it was revealed by K. C. Loughlin, Celanese vice president and general manager of the company's textile division.

The cloth scanner is made up of lamps, two phototubes and a signal amplifier mounted on a small carriage which rides a rail alternately back and forth over the fabric, about one inch away from the knitting needles. Light is reflected from fabric into the phototubes. Any slight change in light intensity caused by a broken or stripped-down thread or a needle defect sets up an immediate signal through phototubes and amplifier, tripping a relay that shuts down the machine instantly.

Fabric defects are thus held to a minimum area and defects can be repaired before starting up machines. The scanner has sensitivity adjustments. When set for high sensitivity, the scanner will stop the machine in response to extremely slight fabric variations—adjusted for normal sensitivity, a bit of black thread placed on the cloth stops the knitting machine.

DYEING and FINISHING Section



from insect killers to living colors

● Only three years after introduction of the first synthetic color by Perkin, the first dyestuff factory was established by Johann Rudolph Geigy in 1859. The history of applied organic chemistry since then is studded with impressive Geigy "firsts" in dyestuffs, pharmaceuticals and agricultural chemicals.

DYESTUFFS

Erio Chrome and Polar* Colors* for wool.

Irgalan Colors* — revolutionary new dyestuff for wool, silk and nylon.

Solophenyl Colors*—tops in light fastness for cottons and rayons.

Cuprophenyl Colors* for better wash fastness, good light fastness on cotton and viscose rayon.

Setacyl Direct Colors* — first in powder form for acetate.

*Tinopals**—optical bleaches for specific fibers and uses.

*Mitin**— the new durable mothproofing agent that prevents moth damage to woolens.

PHARMACEUTICALS

*Butazolidin** for the relief of Arthritis.

AGRICULTURAL CHEMICALS

DDT Insecticides—world famous for their spectacular record in war and peace time use.

*Diazinon**— new outstanding residual fly control chemical.

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PRINTING
SPECIAL
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GEIGY DYESTUFFS

DIVISION OF GEIGY CHEMICAL CORPORATION
SAW MILL RIVER ROAD, ARDSLEY, NEW YORK

dyestuff makers since 1859

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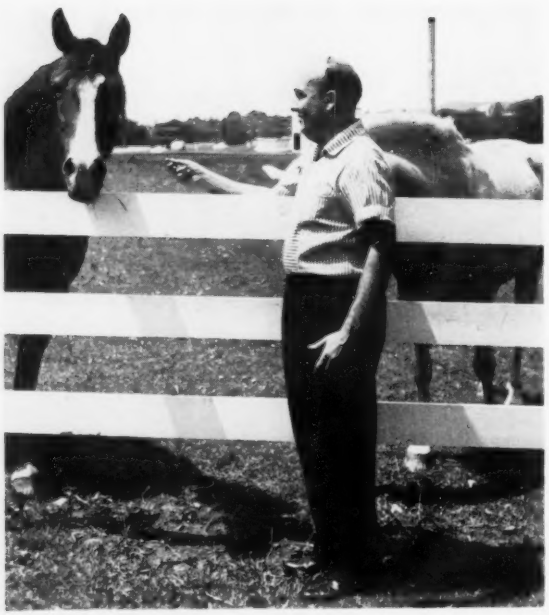

PERCARPIO AND FOUR-FOOTED FRIENDS—Standing on his front lawn, Frank Percarpio entices his two saddle horses into camera range. In the background can be seen the buildings and tall stack of his printing and dyeing plant. For relaxation Percarpio shares horseback riding with his four sons.

Percarpio

(Continued from page 31)

tions would require the newest and best in equipment. While the Chadwick plant was a good one, well-equipped and thanks to Percarpio, well-managed, it was essentially no different from many other printing and finishing plants in the northern New Jersey area. Such equipment, Percarpio decided, was not good enough for the kind of finishing plant he wanted to run in the years ahead.

And so, right in the midst of the best year they had yet experienced, Percarpio astonished his partners by offering to sell out to them. The price of $50,000 which he fixed for his interest seemed to his partners extremely low in view of the handsome earnings of Chadwick and the immeasurable contribution Percarpio had made to Chadwick's successful growth. They accepted his offer, and Frank Percarpio was free to build the printing and dyeing plant of his dreams.

He knew what he wanted to do because he had been thinking about it for several years. He wanted to build a modern printing and dyeing plant from the ground up and equip it with the newest and best machinery, and then go out and get business on the basis, not of price, but of the finest quality work that anyone could offer.

He wanted to build his plant away from the Passaic valley area, haunted as it is, with the sad ghosts of a once flourishing silk business and the once profitable dyeing industry that served the old silk mills of northern New Jersey. He wanted to build a plant in a place that would be pleasant and green enough for him to also want to build a home there for his wife and four growing boys. But still, being intensely practical, he wanted to do all this and yet be close enough to the New York textile market for easy accessibility to his customers.

In the little town of Washington, New Jersey, in the rolling green hills of Warren County about 75 miles from Manhattan, he found what seemed to him the ideal spot for his new printing plant. For their part, the town fathers of Washington were eager to have him come; their community had been on the hunt for new industries to keep up local employment and bring cash to local tradesmen. So they spread out a welcome mat for Frank Percarpio in the shape of a grant of ten acres of green and gently rolling hillside just a mile from the heart of the town and a stone's throw from a main road. They offered Percarpio's new plant the useful help of town water supplies and town gas as well as the sewage facilities so important to a printing and dyeing operation.

Into the construction of his new plant, Frank Percarpio, with remarkable courage, sunk his intire personal fortune, representing the hard-won earnings of a successful business career begun when he had graduated from Paterson High School 18 years earlier. He borrowed additional money and even obtained a loan from one of his former accounts who was keen on seeing Percarpio build his own plant so that it could be assured of getting done the kind of high quality printing it wanted.

In the plant and its brand new printing and auxiliary equipment Percarpio invested initially over $200,000. On a rise in the ground just above his plant, he built a modest, roomy ranch house for his family. From the front steps of his new home, Percarpio could see the new plant spread out along the road below. And it was only a few minutes' walk across an open field to the plant and his office. This was the way Percarpio wanted it; this was the way he had planned it for years—a printing and dyeing plant built and equipped to embody the ideas distilled in an active and keen mind throughout 18 strenuous years in the dyeing business; and nearby a comfortable country home surrounded by green fields for his wife, Marie, and his four sons, later to be joined by a baby sister, Colleen, who was born in 1953.

Started 10 Years Ago

In August, 1946, Percarpio's new business, Castle Creek Prints, went into operation. At the beginning, the plant was equipped with eight 60-yard tables all of them with waxed surfaces to hold the goods in place without the use of pins—the first printing plant in the United States to be so equipped.

At the beginning, Percarpio leased out a large area of the new plant to a dyer. He was anxious to have a good dye business adjacent to his print works so that he could efficiently turn over to it the washing and finishing of his prints. Although Castle Creek Prints flourished mightily from the very first day, the neighboring dyer did not. After it had changed hands a number of times, Percarpio, more or less to protect himself, took it over and re-equipped it from top to bottom with brand new and highly efficient machinery. Under his management, the dyeing business, renamed Northern Dyeing Corp., has also prospered.

In the ten years that have elapsed to a month since Frank Percarpio launched his new business, the textile finishing trade in the New Jersey-New York-New England area has had its ups and downs. In the last few years, the trend has been largely down and down again. Many plants have gone out of business in that decade, and nowhere in textiles is the gloom thicker and the talk more depressing than at a business meeting of dyers and finishers. It is an industry which

(Continued on page 48)

50,000 Reasons Why

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BUTTERWORTH
Serving the Textile Industry Since 1820

Percarpio

(Continued from page 46)

proclaims itself chronically and hopelessly in bad shape; it is an industry in which no one seems to make money and everyone, with a notable exception here and there, talks about operating at a loss.

Against this background of unrelieved darkness, Percarpio's printing and dyeing companies have sketched a picture of startling and uninterrupted brightness. Castle Creek and Northern Dyeing have earned substantial profits every year since they were established. And every year, Frank Percarpio has invested more money into new and more efficient equipment. He pioneered in bringing to this country, for example, two of the automatic, electronically controlled screen printing machines made by Buser in Switzerland. He is intensely interested in new high speed pad dyeing processes. He studies new machines, often recommends improvement of his own devising to their manufacturers. From time to time, he has had built to his plans entirely original machines that will do a better job faster than equipment previously in use.

Percarpio's aim and achievement is to get faster, more efficient production both in printing and dyeing while maintaining the highest quality workmanship. His handling of failles is a case in point. The great weakness of these popular fabrics used to be shrinking in dry cleaning. Percarpio rightly decided that the shrinking took place because the goods were excessively stretched in jig dyeing. He began the tensionless finishing of failles and boldly spent money to advertise that failles finished by his process, trade-named "Norfix", would not shrink more than two per cent in dry cleaning. As a result, converters interested in fine quality failles mobbed him with work. Today, Percarpio estimates that his Northern Dyeing Corp. handles about 75 per cent of the failles on the market.

Percarpio's success has been so great that selling now comes easy for him. His print plant is booked solid a year ahead, year-in-and-year-out. The services of his dye house are sought after by converters and mills that want Percarpio's kind of work. His sales force consists of one person—Frank Percarpio—and his selling takes up only one day, Thursday, of every week. The sales volume booked by this sales force last year was $1,836,438.

As one can guess from his record of success in a difficult business during a difficult time, Frank Percarpio is a man of unusual gifts. He is in fact a business genius in the printing and dyeing trade. A plain-living, straight-talking man devoted to his family and staying for the most part close to his home and his plant, he is also a man of remarkable energy, courage and brilliant intelligence.

Although he has not yet reached his 48th birthday (he looks at least ten years younger) he has achieved a business which is beginning to be well-known throughout the vast textile industry, and with his vigor and bounce, it is hard to think that he will not carry on his companies to still greater success. Some evidence of the stir he is making in textiles can be found in the fact that not long ago a large textile organization (which will not be named here) made him an interesting proposition. It offered him a million dollars for his printing and dyeing businesses along with a five-year contract as general manager at $40,000 a year.

Frank Percarpio took the offer home with him to his house on the hill overlooking the plant and talked it over with Mrs. Percarpio. They held the offer up to the light, so to speak, and looked at it carefully from all sides. In thus examining the offer, they asked themselves why they had worked and struggled together for years to build the Percarpio business. They decided that they had done it largely for their four sons and for little Colleen. Francis, the eldest son, who is 23, took a B.A. degree recently at Cornell and is now working with his father.

The next day Percarpio turned down the offer. He is looking forward to the time when William who is 19 and in the Navy, and Timothy, who is 15 and Bernard who is 11 will, along with Francis, become fellow workers and partners in the printing and dyeing plant down the hill from their home.

Glass Screening Group Formed

Weavers of fibrous glass insect screening have organized a trade association within The National Federation of Textiles, Inc., Officers of the Glass Fiber Screen Weavers Group are: George H. Day II, vice president of Chicopee Mills, Inc., chairman; C. A. Comfort, vice president of Exeter Manufacturing Co., vice chairman, and Edmund Wellington, Jr., secretary. Other founders of the group are R. F. Clark, Hess-Goldsmith & Co.; Charles G. Smith, Plastic Woven Products, Inc.; J. Kevin Ott, J. M. P. Ott Manufacturing Co., weavers for Lockset Screening Co.; and J. P. Schwebel, J. P. Stevens & Co., Inc.

Day said the group has started drawing up by-laws and a "pattern for establishing trade practices and processes."

Slater Museum Opens

The Old Slater Mill Museum, Pawtucket, R. I., has opened for its second season. The mill, long recognized as a familiar historic landmark, will remain open to the public until Labor Day.

On display at the museum are some of the early textile machines which were the basic implements of the industrial revolution, and exhibits of early textile methods and practices, commencing with a pictorial presentation of the story of Samuel Slater and the American textile industry in its infancy.

New Fall-Winter Colors

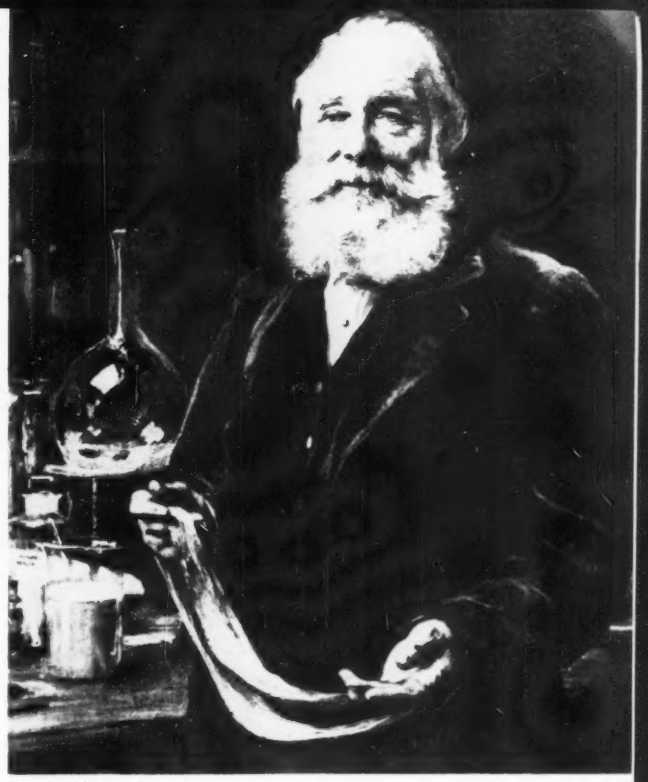
Six new shades, five in the medium scale and one of lighter tonality, are presented in the advance edition of the 1956 Fall and Winter Hosiery Color Card, which The Color Association of the United States has released to its members. Estelle M. Tennis, executive director, stressed that each hosiery tone has been individually color-styled to an important fashion range. The six new shades are: burnished sun, mink taupe, golden spice, vanilla beige, blondlite, and blush dawn.

The association also announced 1957 Spring and Summer colors for man-made fibers and silk. Included in this group of limpid pastel tones for resort and Summer wear are yellow ice, wave aqua, sun pearl, sanmist, water green, crystal blue, grotto pink and shell mauve. Another highlight of this Spring color forecast is a collection of radiant fun colors, called festive hues.

New Engineering Shops

Industrial Rayon Corp. recently held an "open house" for visitors at its new 80,000 sq. ft. plant for the manufacture of its own rayon processing machinery. Located at 4540 West 160 St., Cleveland, Ohio, the plant houses Industrial's Central Engineering Shops which were originally established 20 years ago.

An MTM advance report and program



Sir William Perkin

Dyeing industry's big week

Next month, the entire scientific world will honor William Perkin, founder of today's synthetic dyestuffs industry and great scientist

STAFF PREPARED

PLANS for the Perkin Centennial Celebration, reaching final form as this issue of MODERN TEXTILES MAGAZINE went to press, indicate that the event will be an outstanding scientific and industrial convocation. Scheduled for the week of Sept. 10 to 15 at the Waldorf-Astoria Hotel in New York City, the meeting is supported by 27 chemical, technical and scientific societies and is being sponsored by the American Association of Textile Chemists and Colorists.

Many well-known scientists and business leaders will speak at the meeting on a wide range of topics connected with the use of color in every phase of modern life. As part of the Celebration, there will be an exhibit organized around the theme of "a more colorful world."

William Henry Perkin, a British scientist, discovered mauve, the first synthetic dye, while conducting experiments in 1856 to synthesize quinine. Perkin's discovery not only led to the growth of the worldwide synthetic dyestuffs industry, but also served to stimulate creative thinking in a new field which has resulted in the development of countless chemicals and intermediaries that are widely used in industry.

The opening day of the Celebration, Sept. 10, will be International Day, and it will be sponsored by the American Standards Association and International Organization for Standardization. The principal address on International Day will be delivered at a luncheon at the Waldorf-Astoria by Sir Robert Robinson, Nobel Prize winner, professor emeritus at Oxford University and a director of Shell Chemical Co., Ltd. As a representative of the English Society of Dyers and Colourists, Sir Robert will speak on "Sir William Perkin—his life and works".

Many Exhibits to Carry Key-note Theme

The exhibit which will be staged at the Perkin Centennial will be historical and educational in nature, according to Henry L. Young, Interchemical Corp., who is chairman of the exhibit committee. Organized into integrated parts, the exhibit will depict the historical background of man's attempt to color materials with natural dyes. The exhibits will point up the scarcity and high cost of available dyes. These exhibits will lead up to a display dramatizing the discovery of the first synthetic dye, mauve, by Perkin.

Suitable exhibits in a central gallery will demonstrate properties of modern dyes and their uses in the home, fashion and industry. These will explain how the dye industry has made it possible to satisfy the desire for color through the availability of thousands of dyes, at a cost within the reach of all. Colorful globe settings in the form of metal and plastic worlds will illustrate the wide variety of materials that are enhanced in beauty and appeal through color. Included will be textile fibers, paper, leather, plastics, film, petroleum products, paints, etc.

Other exhibits will graphically illustrate the different industries and their many products that have grown out of the dye industry—such as pharmaceuticals, agricultural chemicals, synthetic rubber, plastics, explosives, elastomers, petroleum products, antioxidants, textile-finishing agents, etc.

Another room will be devoted to a textile fibers and fabrics exhibit and will carry the key-note theme of "A More Colorful World" through the display of "A Galaxy of Fibers and Materials". In addition to exhibits of natural fibers, the advances made by synthetic fibers, many of which are actually coal-tar derivatives will provide an educational counterpart to the

Monday, September 10
International Day
Morning

Topic	*Sponsor*
Colorfastness of Textiles	American Ass'n of Textile Chemists and Colorists; American Society for Testing Materials

Luncheon

Speaker, Sir Robert Robinson, Society of Dyers and Colorists
Topic: Sir William Perkin—his life and works

Afternoon

Color-Catalyst of Commerce	American Standards Ass'n International Organization for Standardization

Tuesday, September 11

Application of Colorants to Plastics	The Society of the Plastics Industry, Inc.
Application of Colorants to Drugs	American Pharmaceutical Ass'n
Application of Colorants to Leather	American Leather Chemists Ass'n
Application of Colorants to Cosmetics	Society of Cosmetic Chemists
Application of Colorants to Paper	Technical Ass'n of the Pulp and Paper Industry
Physics of Color	Optical Society of America; Inter-Society Color Council; American Society for Testing Materials
Color in National Defense	National Research Council Advisory Committee
Impact of Synthetic Dyes on our Economy	U.S. Dept. of Commerce

Wednesday, September 12

Application of Colorants to Food	Institute of Food Technologists
Pigments and Color Lakes	Dry Color Mfgrs. Ass'n; Nat'l Paint, Varnish and Lacquer Ass'n
Psychology of Color	American Psychology Ass'n and Inter-Society Color Council
Color Harmony from Fashion to Industry	Color Ass'n of the U.S.
History of Color	American Ass'n for the Advancement of Science

Thursday, September 13
Morning

History of Dyeing	American Ass'n of Textile Chemists and Colorists
Manufacture of Synthetic Dyes	Synthetic Organic Chemical Mfgrs. Ass'n; Mfging Chemists Ass'n

Noon

Olney Medal Award Luncheon

Afternoon

Application of Colorants to Textiles	American Ass'n of Textile Chemists and Colorists; Canadian Ass'n of Textile Colourists and Chemists
Color in the World of Fashion	Good Housekeeping Institute and the Nat'l Retail Drygoods Ass'n

Friday, September 14
Morning and Afternoon

Chemistry of Synthetic Dyes	American Chemical Society

Evening

Perkin Medal Award Banquet	American Section of the Society of Chemical Industry; American Chemical Society; American Institute of Chemical Engineers; American Section of the Societe de Chimie Industrielle

Saturday, September 15

Theories of Dyeing	Textile Research Institute
AATCC Intersectional Contest	American Ass'n of Textile Chemists and Colorists

Evening

Annual AATCC Banquet

dyes exhibit and clearly depict the close relationship between dyes and textiles.

A third display will center upon the functional finishes that help to make colored textiles practical and beautiful by imparting desirable properties and characteristics that are sought by the ultimate consumer. Many leading American manufacturers of fibers and textile finishes have signified their intention of taking part in this notable event.

A fourth unit will be contributed by the American Association of Textile Chemists and Colorists and is to exhibit colorfastness and other testing equipment developed to assist in the production of finer quality fabrics to meet exacting standards.

Kodak Display in Grand Central Station Will Feature Perkin Centennial Theme

A special exhibit in the Kodak Photographic Information Center in Grand Central Station, New York City, will be devoted to the Perkin Centennial during the Centennial Week of Sept. 10 to 15. The Kodak exhibit will show how synthetic dyes are used in color photography.

Part of the display will be presented as a color slide show, operating continuously from 10 a.m. to 10 p.m. daily. It will demonstrate the chemical and physical nature of layers of photographic emulsion on a typical color film and the manner in which dyes are formed in the emulsion by the photographic developing process.

The slide show will thus illustrate the layering of the emulsions, the components of each layer, the action of the layers and their components when exposed to light and processed, and the final result.

In addition, Kodak is planning to show two pairs of contrasting oversize color transparencies, each picture being 30" x 40" in size, which will demonstrate that before the modern utilization of synthetics, color was the privilege of the few, whereas today it is the pleasure of the many.

The first of the contrasting transparency pairs will portray a historic figure garbed in royal purple contrasted with the colorful dress of today's teen-agers. The second pair will contrast the drab household of the Victorian era with the colorful decorative schemes of contemporary homes.

Draper gifts to aid colleges

A plan to provide financial assistance to American colleges and universities was announced recently by Draper Corp., Hopedale, Mass. manufacturer of automatic looms. Objective of the new program, according to a Draper spokesman, is to help colleges and provide improved housing and instruction facilities, with incentives for highest quality teaching in a greater number of subjects.

Another purpose of the Draper program is to permit overall expansion of colleges and universities to accommodate an increased student enrollment which will help to insure a place for children of Draper employees in schools of high standard.

This plan calls for the joint participation by the corporation and individual employees who either hold a degree from a college or university, have been in attendance there as a full time day or evening student for at least one academic year, or whose children fulfill either of the above requirements.

It is the intent that within the limits of the plan, gifts will be made from corporation funds in an amount equal to those made by the individual employee alumnus. The total contribution to be made by Draper Corporation under this plan with respect to the contribution of an individual employee shall be limited to $1,000 in any one calendar year.

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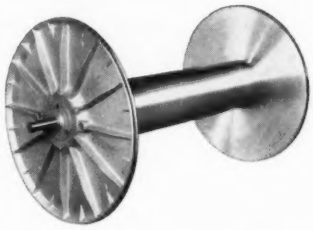
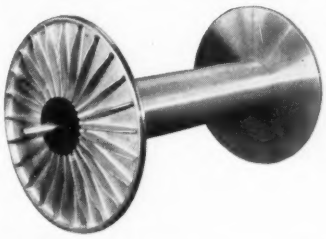
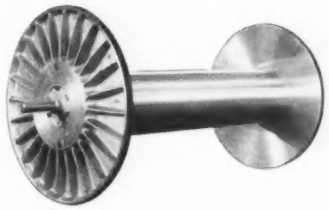


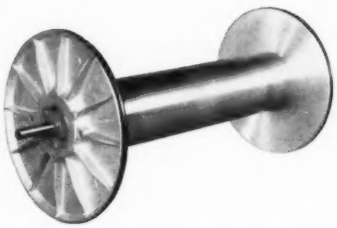
HAYES 38" x 54½" Aluminum Section Beam for cotton and spuns. Lightweight 207 lbs. Capacity, net weight of yarn 1,050 lbs.



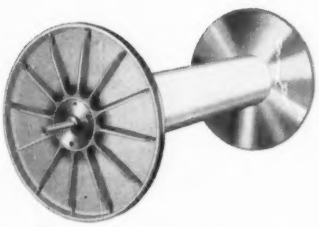
HAYES 36" x 54½" Heavy Duty Aluminum Section Beam for acetate, spuns, and cotton. Can be adapted to all standard warpers.



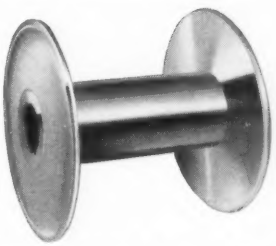
HAYES Heavy Duty Section Beam for nylon. Can be furnished in 30" and 32" diameter heads. Barrel diameter 11¾". ½" minimum wall.



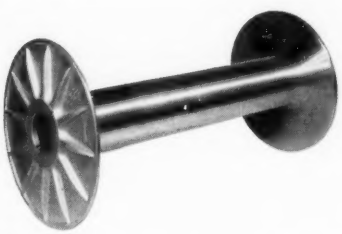
HAYES Bolted Type Section Beam for acetate. 30" x 54¼". 11¾" diameter barrel. Can be adapted to all standard warpers.



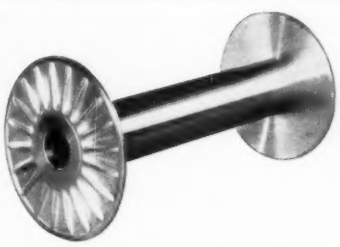
HAYES Aluminum Section Beam for acetate. Screwed type. Head sizes 26", 28", 30", 32". 54¼" traverse. 11¾" diameter barrel. Can be adapted to all standard warpers.



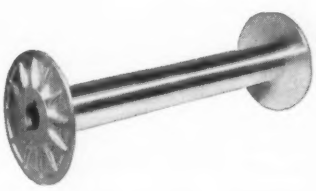
HAYES 21" Aluminum TRICOT Beam for nylon. Barrel size 7¾" diameter. Head thickness 1". Furnished in ⅜" and ½" wall. Bored for 4½" shaft. Keyways 9/16".



HAYES 21" Aluminum TRICOT Beam for acetate. Barrel 7⅜". Head thickness 1". Any desired traverse. Bored for 4½" shaft. Keyways 9/16".



HAYES 21" Heavy Duty Forged Head Aluminum TRICOT Beam for nylon. Head thickness 1¼". Barrel 7¾". ½" wall. 39-7/16" traverse. Bored for 4½" shaft. Keyways 9/16".



HAYES 13¾" diameter Aluminum TRICOT Beam for acetate. Barrel size 4.925" diameter. Made in head thicknesses of 39/64" and 1". Traverse dimensions to suit. Bored for 2¾" shaft. Keyways 9/16".

HAYES manufactures a variety of Aluminum Loom Beams to fit Draper, and Crompton & Knowles looms, for acetates, spuns, and nylon. These can be manufactured with fixed or adjustable heads in sizes from 22" to 32" diameters.

The meaning of PERKIN'S ACHIEVEMENT

His discovery of mauve has brought a new world of heart-warming color

By A. G. Bruinier, Jr.

TODAY it is difficult to realize the significance of the discovery of the first synthetic dye, by William Henry Perkin, 100 years ago. We have come to expect the availability of all types of dyes developed for specific applications. The countless variety of all kinds of colored articles and merchandise that are within our reach bears this out.

But before 1856 the story was quite different. The early efforts of man to duplicate the beauty and color of his surroundings consisted in staining his clothes with colored juices derived from flowers, fruits, bark of trees, insects and shellfish. Most of the resultant dyeings were only temporary because few true dyes existed in nature. Also the variety of shades was limited and generally did not stand up to the effects of sunlight and washing.

However, there were some colors that have survived the ravages of time. Indigo was one and the renowned Tyrian purple another.

Dyed fabrics were a luxury and could only be afforded by royalty and the wealthy as connoted by the names of "royal purple," "royal scarlet" and "royal blue." Pliny condemned the high prices charged by dyers for Tyrian purple. A pound cost the equivalent of what would now be $150 which presents a striking difference when compared with the present-day figure of $1.17 per pound reported by the U.S. Tariff Commission for the average price of all dyes produced.

Mordants Improve Dyes

The continued desire of individuals to maintain beauty of surroundings through more durable colors led to the use of mordants which possessed the ability of causing the dye to adhere firmly to the fabric. Not until this discovery was made, probably in India prior to 2000 B.C., did the art of dyeing make any appreciable progress. Through this mordanting technique the Egyptians were able to use the Biblical scarlet, the last of the "big three" dyes of that early period, which was obtained from the insect, kermes.

Yellows were produced by the Egyptians from saffron, derived from the flowers of the common yellow crocus. Reds were developed from the roots of the madder plant, which was also used to produce purples and browns. The brilliant and durable scarlet, "Turkey Red," was probably known before the Middle Ages. It was developed in the Near East and later adopted by the Europeans. The dyeing process required for applying Turkey Red is one of the oldest known and also the longest.

The skills of the dyers in Egypt, India, China and Persia were brought into Europe by the Phoenicians and Alexandrians. But little technical progress was made on the continent until the 13th century because most of the dyeing was done in the home. At that time, the accomplishments of Federigo in Italy stimulated a considerable revival in the art. The first book on dyeing was published in Italy in 1429. From there knowledge spread to Germany and the rest of Europe, centering especially in Holland and Belgium. The discovery of the New World and the opening of the Cape route to the East brought in coloring materials and dyeing methods. Cochineal, similar to kermes, was imported from Mexico early in the 16th century by Spaniards who had seen the natives using these insects for dyeing.

Vegetable Dyes Lacked Fastness

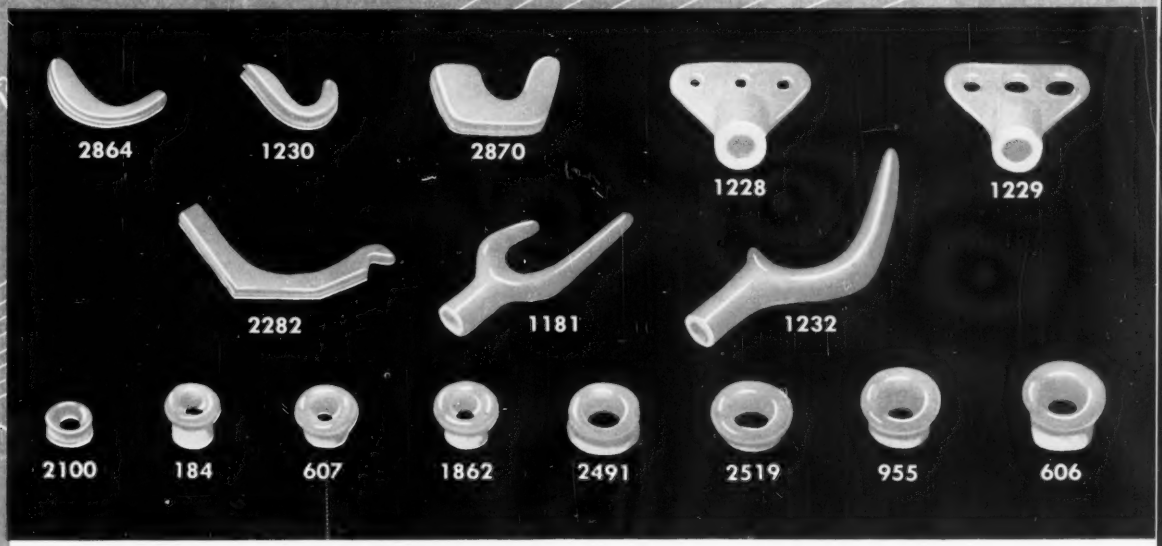
But as long as man was dependent upon the animal and vegetable worlds for his dyes, his progress was restricted by the skill of the operator in mixing dyes and perfecting techniques. Dyeing was then an art, not a science as it is today. The dyes available varied greatly in quality and, consequently, so did results obtained. Many of the natural dyes lacked fastness and were difficult to apply satisfactorily to fabrics and they were also expensive. There is little evidence to support the idea which has been so firmly fixed in the minds of many, that to obtain durable and artistic effects it was necessary to resort to the vegetable dyes of our ancestors. Dyeing is now based on soundly established chemical principles. The end results can be predetermined; the fastness is known and correct dyes can be selected to conform with the requirements of the finished fabric, garment or article.

Little fundamental progress was made in producing better dyes until the accidental discovery of mauve in 1856. William Henry Perkin was attempting to synthesize quinine, using aniline as one of his raw materials. In one of his unsuccessful experiments a dark-colored mass was formed. But when it was dissolved in alcohol a violet liquid resulted which had the power to dye silk and wool. Had it not been for the presence of toluidine as an impurity, the development of the first synthetic dye might not have occurred at that particular time. Perkin had the foresight to recognize the industrial possibilities of his invention. After patenting the process, he established the first factory in the world for manufacture of dyes.

Compared to some of the present day processes for vat and other type dyes, Perkin's method of manufacturing mauve was quite simple, consisting of only four steps. But the yield of actual dye was only five pounds per ton of coal and in 1860 the price of aniline violet in the United States was around $300 per pound.

The publication of Perkin's discovery aroused interest in the study of the chemical composition of coal tar products by chemists all over the world. During the following 50 years, many important discoveries followed one another in rapid succession. It was found that of the ancient dyes, indigo and turkey red could be produced synthetically and more economically than the natural products. Despite inten-

(Continued on page 61)



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REPORT FROM EUROPE

BY SPECIAL CORRESPONDENT

Tariff cuts under GATT disturb British, too

LONDON—Publication of the latest downward tariff revisions by GATT (General Agreement on Tariffs and Trade) seems to have left the British rayon trade a bit up in the air. In brief, manufacturers are heaving a sigh of relief that the duty cuts were less than they had feared. But rayon-using industries are somewhat indignant about it all.

Anyway, here's what happened to British rayons under the June GATT revisions: (1) There were no changes in the man-made staple fiber duties; (2) yarn and fabric tariffs are reduced. For both continuous filament and spun yarns, the cut goes from nine pence a pound, plus 22½ per cent ad valorem, to nine pence and 20 per cent. In fabrics containing 75%, or more, man-made fibers the old rate was 11 pence a pound plus 8 pence a square yard, or 22½% ad val., whichever is greater; the new: the portion computed on weight goes down to 8 pence a pound.

Anti-Dumping Law Asked—Shortly after GATT returns were in, the British Man-Made Fibers Federation said it was withholding "any constructive comment" until the full impact could be weighed. In advising the Board of Trade, the federation had held that any cuts would hurt the rayon industry, which had to cope with hidden dumping from Europe. But the mild manner in which the federation—and individual mill men—are reacting can be taken to mean: "Well, that's over; didn't hurt a bit."

Bilateral Industry Deals—Belgium, the Netherlands and West Germany during recent weeks attempted to spread themselves a bit thinner textile-wise under the principle that "If you can't beat 'em, join 'em."

Belgian textile leaders have been in contact with Irish government officials, and reports have it that the Belgians would be glad to help Ireland produce more textiles. The Belgians would supply the machinery. It could not be learned whether linen was involved.

The Dutch affiliate of a leading Danish nylon hose producer (Scandinavian American Nylon Hosiery Co.) has a plant at Emmen. Danlon NV, the Dutch firm, has been making 2,500 dozen pairs of hose a week—or 7.5% of total Dutch output. Under the latest agreement, output should rise three to four times.

And a Mink Coat Item—Midsummer may not be the best time to mention it, but Lister & Co., British man-made textile makers, have come up with a man-made, rather than mink-made, coat for the little lady. The "fur" is called "Minquilla," has two layer piles to imitate the two lengths of hair of the mink-made job. It also comes in white, platinum and brown. What, no pastel?

On the other hand, Sir Ernest Goodale, president of the Silk and Rayon Users' Association, questioned his government's philosophy regarding GATT. Sir Ernest recently stated that under GATT, the cost of importing European goods exceeded the value derived from UK exports. He went on to urge a tough policy on future negotiations and, specifically, anti-dumping legislation. His point was that if such legislation merely existed it would deter the worst of the European dumpers.

Government Aid for Textiles Asked—GATT technicians are probably pondering the meaning of two textile events that occurred during the past few weeks. Greece's only major rayon producer, ETMA, has applied to Greek court authorities to allow it to shut down until such time as the Finance Ministry allows an increase of import duties on rayon fiber which were cut last November. For non-Greek rayon men, this may mean new export sales, assuming the duties do not rise.

The French Finance Ministry, at the insistence of the hard-pressed textile industry, agreed to curtail—temporarily until Dec. 31—the 30% import duty on certain textile dyes not made in France. They are mainly used for making green colors. This will lower the cost of French green fabrics.

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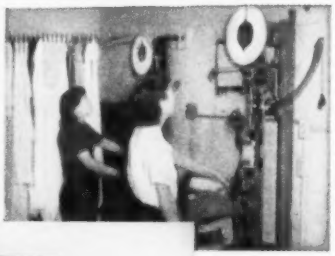

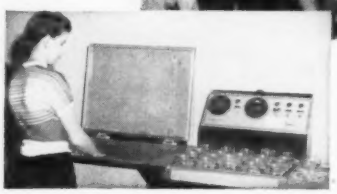

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NEW FABRICS

NEW YARNS

T-Shirt Without T

The T-less T shirt has won consumer interest wherever men's apparel is sold, according to Oneita Knitting Mills, Andrews, S. C. The T-less shirt, with armholes instead of the conventional short sleeves is finding favor as both outer and underwear, the company says. The collar and armholes are finished off, and reinforced with nylon ribbing, while the shirt is made of shrink-resistant combed cotton.

Another innovation, offered by Oneita, is a V-neck undershirt designed for the man who wears a sport shirt and doesn't like to have his undershirt show at the neckline.

Du Pont '680' Nylon

Commercial production of 40-denier, 13-filament Type 680 nylon fills out the denier range of the new white nylon produced by Du Pont's Textile Fibers Department. Type 680 is now available in eight different multi-filament yarns, from 20-denier, 7-filament to 200-denier, 34-filament, as well as in 15-denier monofilament. The new denier makes possible contributions of initial whiteness, and retention of appearance in processing and use, to a wide range of apparel and domestic fabrics.

Synthetic Fiber Felts

Perfection by American Felt Co. of an improved technique of mechanically interlocking synthetic fibers of all types to produce felt-like structures has been announced. This manufacturing development, the company said, makes possible the production of industrial fabrics possessing all of the desirable three-dimensional physical characteristics of wool felt plus the desirable chemical and thermal properties possessed by man-made fibers.

Acid-Resistant Fender Covers

Development of the first completely acid-resistant fender covers for use by auto repair shops and service stations has been announced by Industrial Textile Mills, a division of Industrial Wiping Cloth Co. Made of Dynel, Union Carbide and Carbon Corp.'s acrylic fiber, the covers are of a single-weave, napped construction and designed to cover the entire fender, to allow tools and parts to rest on them without sliding off. They actually polish the fender while in use. Of primary importance is the acid-resistance, particularly sulfuric acid, of the covers.

Crease-Resistant Linen

A group of British scientists working for Tootal Broadhurst Lee Co. Ltd., have discovered a new and better method of treating linen to make it crease-resistant. Tootal will apply the new process to linen now being produced in its English plant. The first bolts of treated cloth will go on sale in American stores this fall, in time for resort wear. It will not be available in Britain or Europe until next spring.

3-Dimension Fabrics

Candalon Upholstery Division of Collins & Aikman reports it has developed new fabrics in which polyethylene fibers are incorporated. Unique surface textures are said to be achieved through the new scientifically-controlled use of polyethylene fibers which are wrapped around either mohair, nylon, rayon, acetate or metallic yarns.

After weaving, immersion in a boiling-hot water bath shrinks up the polyethylene yarns from 35 to 50 percent of their original length. This shrinkage, the division points out, imparts a permanently curled effect to the core yarns, resulting in three-dimensional fabrics.

THE TEXTILE DISTRIBUTORS INSTITUTE, INC.

NEWS AND COMMENT

Cotton and man-made fibers can help each other

By Robert C. Shook

IN THE APRIL 27 issue of "U. S. News & World Report", the National Cotton Council published the text of its leaflet entitled "Let's Talk Facts About Fibers." In once more printing this text, the Cotton Council has, in our opinion, disregarded what is good for the textile industry as a whole and what is good for cotton.

Many TDI members distribute cotton, as well as man-made and blended fabrics. For most members, however, man-made and blended fabrics account for a major part of their annual sales. If TDI and its members believed that knocking other fibers was good business and good ethics, therefore, cotton would be the fiber to receive its verbal brick-bats. TDI, however, takes a different view, which it believes is shared by all responsible textile people, that the joint goal is better business for all textiles, and that textile people, regardless of their fiber persuasion, can help themselves by helping each other.

As the trade representative of what are chiefly man-made fiber and fabric interests, therefore, TDI now takes one of cotton's chief witnesses for the prosecution, Dr. Jules Labarthe of the Mellon Institute, for cross-examination. (We add quickly that Dr. Labarthe was an unwitting witness in the prosecution of rayon by the Cotton Council, and was obviously quoted out of context). And the purpose of this cross-examination is not to snipe back at cotton, but to take Dr. Labarthe's 15 year study, "Ten Thousand and One Customer Complaints" (Textile Research Journal, April 1954), and to extract from it a few of the conclusions that have value for the textile industry as a whole.

Exhibit I is a breakdown of the causes of customer complaints for dresses and blouses. (See table.)

This table shows plainly:

1. that perspiration or anti-perspirant damage was a relatively greater cause of complaint for cotton dresses and blouses than for either rayon or acetate dresses and blouses;
2. that washing or dry-cleaning damage was a relatively greater cause of complaint for cotton dresses than for rayon or acetate dresses, and for cotton blouses than for acetate blouses;
3. that wear failure was a relatively greater cause of complaint for cotton dresses and blouses than for acetate dresses and blouses.

This is what these particular statistics very plainly show. But what do they mean? Would it be fair to say that cotton is a fiber which washes poorly and wears poorly, and that is especially subject to perspiration and anti-perspirant damage? Of course not. Remember, these statistics were collected over a period of 15 years, ending in 1953. And it is largely since then that the big increase in use of cotton in finer, more delicate and more highly styled fabrics has occurred.

CAUSES OF CUSTOMER COMPLAINTS
(percentage of returns)

	Dresses			Blouses		
	Cotton	Rayon	Acetate	Cotton	Rayon	Acetate
Generally customer at fault						
Perspiration or anti-perspirant damage						
Holes	18.7%	9.4%	8.0%	39.0%	6.2%	2.0%
Color change or dye bleeding	1.3	6.1	7.3	0.5	3.3	0.7
Washing or dry cleaning (4), (5), (6), (9)	33.7	20.7	13.1	25.8	29.8	14.0
Ironing, (Scorching, glazing, melting)	1.3	0.9	14.6	1.0	1.4	45.2
Staining & Spotting	7.5	4.3	11.5	3.4	5.7	2.9
Wear Failure (10) & (11)	11.6	17.8	6.7	12.7	14.2	8.0
Other (12), (13), (23)	6.3	5.2	2.1	3.9	9.5	3.3
Generally merchandise at fault						
Garment Construction (14), (18)	2.4	3.9	2.1	2.4	8.1	3.0
Fabric Finishing (16), (17), (20), (22)	14.2	26.1	32.3	9.3	13.7	8.3
Shifting of Yarn	0.2	4.6	2.2	1.5	8.1	8.7
Faulty sales information	0	1.0	0.1	0.5	0	3.9
Sun Rotting of Fabric	2.8	0	0	0	0	0
	100.0	100.0	100.0	100.0	100.0	100.0

(4) Washing or dry cleaning (dimensional change).
(5) Washing (color damage).
(6) Washing (holes, rips).
(9) Corrosive chemicals (holes, including bleach damage).
(10) Wear strain (holes, rips, cuts).
(11) Wear abrasion (worn areas).
(12) Heat or burning (damage except from hot iron).
(13) Insects (moth and carpet beetle holes, etc.).
(23) Miscellaneous (dermatitis, mildew, etc.).
(14) Seam failure.
(18) Garment construction (seams skimped, poor fit, flaws).
(16) Sun fading of dye.
(17) Gas or atmospheric fading.
(20) Improper processing (odor, print holes, etc.).
(22) Crocking or rub-off dye (dry or wet).

Without having information about the nature of the garments on which these statistics are based, therefore, it is much more reasonable, and much fairer to cotton, to assume that the rayon and acetate dresses and blouses were regarded by customers as finer garments, and were given more careful treatment in washing and were less exposed to the damaging effects of perspiration and anti-perspirants.

Cotton is an old fiber, and its many desirable characteristics are well-known by TDI members and all other fiber producers and processors. TDI would regard it as being futile, and damaging to the textile industry as a whole, to engage in "hocus-pocus and verbal sleight of hand" with regard to these statistics, and claim that cotton is inferior in the qualities cited above.

TDI is well aware of the problems in fabric quality. It is well aware of the difficulties in controlling fabric quality, and of improving it, in an industry which is so highly competitive in nature, and which is so frequently subject to violent cyclical fluctuations. There is an approach, however, through industry-wide Performance Standards, which will assure the consumer and retailer of satisfactory quality, regardless of fiber content. TDI's activities in creating Proposed Standards, and in backing the basic concept of improved fabric quality, may take some time to bear fruit, but at least represents a constructive approach to a problem which has been a serious cause of complaints.

In the statistics cited above, cotton as a fiber has been hurt somewhat less in these respects during the period from 1936 through 1953 than the man-made fibers. However, when more than 14% of the cotton dress complaints and more than 9% of the cotton blouse complaints have been caused by faulty finishing, surely that fiber's representatives can find here a reason to join with others in attack on the sources of this difficulty.

Industry-Wide Standards Needed

There is need for a combined industry action, supported by all fiber producers, all fiber processors, all textile distributors, and all garment manufacturers, to strengthen the position of the textile apparel industries in their competition with other producers of consumer's goods.

The industry itself is highly competitive, and subject to sharp changes in the cycle of demand. In the spirit of strife and intense competition which overhangs the industry, it is all too easy for the representatives of an individual fiber to forget who their chief competitors are.

We therefore wish to remind the National Cotton Council that rayon, acetate, wool, silk, flax, or the new synthetic fibers are not the enemies of cotton or even its chief competitors. In a post-war period in which sales of automobiles, new homes, major appliances, and consumer services, education and travel have been showing consistent increases of 20, 30, and 40 percent, while the combined sales of textiles and apparel have registered gains of only 5, 10, and 15 percent, it is plain that the consumer has already rendered a verdict, which is none too favorable to textiles as a whole.

The textile industry is confronted with a problem which is at one and the same time serious and simple. Will it battle internally for a bigger share of pitifully small sales increases? Or will it battle jointly for bigger sales increases for the industry as a whole?

The issue at stake here is not any particular comment about any particular fiber. It is the common need, throughout the entire textile and apparel industries, of advertising and promotion which will be successful in selling more textile products.

It is quite obvious that each fiber, merely because it it different in some respect from all the others, is needed, either alone or in combination, to meet some special need of industry or the consumer. It is quite plain that mills, knitters, finishers and textile distributors, because of the new fibers and finishes, are better equipped than ever before to meet these industrial and consumer needs, and to create new ones.

From the viewpoint of both the consumer and the textile processor, therefore, it is quite plain that there is no "battle of the fibers". Every fiber is superior in some respects, but no fiber is superior in all respects. In every well made blend or combination yarn fabric "the whole is greater than the sum of the parts". To understand that the textile industry is strengthened in its competition for the consumer's dollar by having many fibers at its disposal requires no more than the simplest kind of logic and common sense.

But, although there is no battle between the fibers, there has been, and there still is, a battle between fiber producers. Each producer has a strong vested interest in the fiber, or fibers, which he represents. It is entirely natural that the prime purpose of all his advertising, promotion, and educational activities, therefore, is to increase the sale of his fiber.

And since the combined advertising budgets of all the fiber producers and fiber representatives, natural as well as man-made, represents a tidy sum, it is quite plain that the "battle of the fiber producers" will influence the attitude of consumers toward textiles as a whole, and will affect the position of the textile industry in its competition with producers of other types of consumers' goods.

Whether this well-financed battle between the fiber producers will be good for the industry, or whether it will have adverse effects, depends chiefly on the "rules of warfare" under which it is conducted, and the extent to which these rules are respected.

These rules are simple:

1. DON'T LIE ABOUT YOUR FIBER.

It is too much to expect that fiber advertising will tell the whole truth about a fiber. Every fiber is inferior in some respects, and the theme of all advertising is naturally those qualities in which the fiber is superior. But if the fiber producer lies about his fiber, either consciously or unconsciously, either openly or by implication, he will hurt his fiber and he will hurt the textile industry.

2. DON'T KNOCK ANOTHER FIBER.

Sooner or later, in one end-use or another, your fiber will need the one you're knocking. So, although you can't be expected to spend your advertising dollar to build the other fiber up, at least don't knock the other fiber down. In some respects, the other fiber is better than yours. And remember—General Motors doesn't sell Chevrolets by knocking Ford. Macy's may not tell Gimbels, but Macy's doesn't knock Gimbels.

Sometimes it is hard for the fiber producer to obey Rule Number 1. What the producer says about the fiber may be true. But the consumer buys a finished product; and what is true about the fiber may not be true about the finished product which contains it. Producers of the new synthetic fibers learned quickly, the hard way, that fiber advertising claims were very damaging to them *unless most of the finished prod-*

(Continued on page 61)

that golf tournament

Snapshots of the famous three-day outing and funtime when members of Textile Distributors Institute and friends forget the woes of fabric making and marketing

Merwin R. Haskel (second from left) is awarded the Julius Chopak Trophy for winning the members' Class A low net contest. Others in the picture are Harry Obitz (extreme left) Shawnee golf professional; Abe Kirschenbaum, chairman of TDI's Sports Committee (second from right) and George Greenspan, chairman of the Golf Tournament Committee (right).

Kingpin as usual of the annual TDI musical show, Charles Carvin as Dr. Fraud, a psychiatrist, diognoses the complex ills of the textile industry.

A sociable chat before teeing off.

A neatly executed putt at the first hole.

Fighting his way out of the rough.

(Above) Richard Deneau, appropriately garbed in operatic costume, sings of the exclusive joys of the Opera Luncheon Club.

(Right) In another scene from the TDI show, Charles Carvin as a hillbilly mother listens to two of her sons sing a duet. They are Lon Nave (center) and Terry Kilborne (right).

REPORT FROM JAPAN

New Japanese report points to big expansion by 1960 of output of acetate, newer fibers

By B. Mori

OSAKA—Japanese production of acetate and synthetic fibers including rayon has passed from experimental stage. Capacity has doubled within past 12 months and will almost redouble again a year hence. In 1960, Japan will have caught up with Western world in acetate and the newer synthetics. Those are major conclusions drawn from a study of industry's progress and prospects, by Japan Chemical Fibers Association, and by matching figures of that study against industry/Government plan for achievement by 1960.

Here is how figures look:

Acetate: Capacity of 8 metric tons per day in Spring 1955; 20 tons in Spring 1956; about 40 tons by early 1957.

Nylon: Capacity of 18 tons a day last year was boosted to 41 tons earlier this year; will be 61 tons a year hence.

Vinylon: Plants were rated at 16 tons a year ago; now 27 tons; will be around 40 tons a day a year hence.

Saran: Capacity has remained unchanged at 10 tons a day; future plans are not definite (though expansion would seem to be logical because of good market which is absorbing all current production readily).

Creslan acrylic fiber will be added shortly, as reported on this page in our May issue. Now it is indicated that long negotiations for Terylene have reached stage of submitting proposed contract to the Government. So this polyester fiber will be represented in Japan, too.

Japanese Expansion Deemed Certain—Therefore, the Japanese Government's estimate of 230 million pounds' production of acetate and synthetics in 1960 may, in fact, turn out to be conservative. In any case, it is obvious that by 1960 Japan will be one of world's leading producers of synthetics in terms of diversity and total quantity.

It seems clear that manufacturers will concentrate first on diversifying distribution and solidifying domestic markets. But it is inevitable that Japan should also expand exports of synthetic textile products along trade channels already well established for cottons, rayons. This means greatest markets will be Southeast Asia, Middle East and perhaps Latin America.

Licensing restrictions in most cases will prevent distribution of yarns and fibers in countries where licenses originate, or where other licensees operate. In any case, both acetate and synthetics are now more expensive in Japan than in U. S. This should continue to be an important consideration limiting if not oblivating entirely exports to U. S. This cost relationship could, conceivably, reverse itself at some future time. Export outlook then might change.

End Products Unrestricted—Neither licensing nor price limitation will be of overall importance in secondary products, however. Nylon filament gloves and stretch yarn products are already being sold to U. S., but in small quantities. It is reported that proposed licensing of Terylene would prevent sale of fibers and yarns in U. S., but not secondary products. It remains to be seen whether introduction of an acrylic fiber in Japan stimulates sweater business as it has in U. S.

The Chemical Fibers Association report indicates that both apparel and industrial uses of synthetics are being broadened in Japan—an important factor at this early stage in building a firm base for marketing larger quantities later on.

Note: For readers who wish to study this report in full, the editors of Modern Textiles Magazine may be able to obtain copies. If interested, write the editors at 303 Fifth Ave., New York City.

Teachers' Seminar

(Continued from page 32)

are represented by the participating home economics teachers.

Miss Marilyn Horn, teacher of clothing and textiles, University of Nevada, said that to her the most valuable feature of the seminar was the variety of elements covered by its presentations. In showing how good fabrics were the result of joint efforts by fiber producers, mills, converters, dyers and garment manufacturers and in stressing the importance of research, the seminar had carried her beyond the recitations in textbooks to show her the realities of the textile industry. What she had thus learned, she said, would enable her to give textiles a more dynamic and vivid presentation to her students.

Mrs. Constance Whitaker of Ohio Wesleyan University said the seminar had been well organized and packed with valuable material to her as a teacher. She did, however, have a criticism which was shared by others of the group: she felt that in the future it would be good if the time schedules of the seminar could be arranged to allow the participants a little more free time for shopping in New York!

On the opening day of the seminar, the group assembled at Du Pont's headquarters in Wilmington, Del. The day was spent in listening to specially prepared talks by Du Pont staff members and tours of Carothers Laboratory and the Textile Research Laboratory at Chestnut Run.

On July 3, the seminar moved north to the American Viscose Corp.'s laboratory at Marcus Hook, Pa. Interspersed with talks by Avisco specialists, the teachers studied actual textile manufacturing operations in the company's Textile Research Department.

The fourth day of the seminar, July 5, was spent with the Celanese Corp. in New York City. Here the fashion aspects of textiles was emphasized. In special talks and a fashion show the teachers were shown how imported garments from big-name couturiers abroad are imported by Celanese and made available to American garment manufacturers. The group also visited the garment manufacturing plant of George Hess & Co., Inc., and saw at first hand how dresses are made by mass production methods.

On Friday, July 6, the wind-up day of the seminar, the participants were guests of Eastman Chemical Products, Inc., in New York. The day started with a tour of the headquarters of Burlington Industries at 1407 Broadway during which they heard talks on fabric styling and promotion by Burlington experts. During the afternoon, the home economics teachers participated in two panel discussions on fabric advertising and promotion at the offices of Eastman.

Perkin

(Continued from page 52)

sive activity on the part of chemists the time element between the development of new dyes in the laboratory to practical commercial production usually was a matter of years. By 1890, synthetic dyes had attained considerable stature and natural dyes were well on their way to obscurity.

European chemical manufacturers had established a virtual monopoly of the dye industry. Prior to 1914 only 10% of the dyes consumed in the United States were made here. In that year the domestic production was less than seven million pounds. It did not represent complete preparation of the dyes, but merely combining certain intermediates with other raw materials to form the finished product. When foreign sources of supply were cut off, a number of chemical manufacturers started the manufacture of dyes. By 1917, 81 concerns were engaged in dye production, but the range was limited to those for which the need was greatest. The initial hazards were many. Lack of experience, financial barriers and other factors soon eliminated many of the pioneers. By 1937 the number of domestic producers had dropped to 43, who produced over 122,000,000 pounds at a sales value averaged at 58 cents per pound.

Today, within a span of about 40 years, America is self-sufficient and has a dye industry that is unsurpassed. Its products are the equal of any produced by other nations. Dye-consuming industries have at their disposal an annual production of around 150,000,000 pounds of coal tar colors consisting of more than 1000 different dyes which embody degrees of fastness capable of meeting almost every normal requirement. These range from the durable vat dyes that possess outstanding resistance to most color-destroying influences to dyes suitable for application to any of the new synthetic fibers.

No longer is royalty the sole owner of colored vestments. The development of synthetic dyes, along with improvements in textile manufacture, allowing mass production of moderately priced fabrics of good quality, has permitted the wide use of color in our daily lives, thus providing the means to a richer, more beautiful, more colorful world.

Cotton and Man-Mades

(Continued from page 58)

ucts available to the consumer would also satisfy the claim.

So at that point they immediately went to work on two fronts:

In advertising, to talk chiefly about identified finished products of satisfactory quality and performance.

In merchandising, to encourage maintenance of quality in a greater number of finished products.

Cotton is a good, sound fiber, which has held its own against all competition. Per capita consumption of cotton is still about what it was in 1913, before the first world war, despite rayon, acetate and all the new fibers. The consumer has obviously been satisfied, and still is satisfied, with the many things cotton can do.

But the *increase* in per capita consumption which has occurred during the past two decades has been accounted for by the man-made fibers. Nothing is to be gained by denying the contribution these fibers have made. Nothing is to be gained by pretending that any fiber can do things it can't do. To break the simple commonsense rules of sound fiber advertising and promotion—"don't lie; don't knock"—is to build up to a big letdown which will hurt the individual fiber and the entire textile industry.

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Blends

(Continued from page 34)

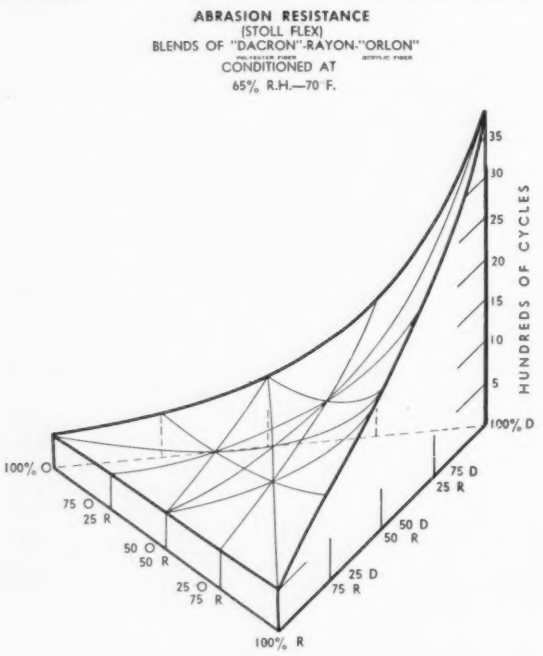


Fig. 3

tically insignificant increase in strength afforded by blending less than roughly 25% of Dacron with Orlon and rayon. If significant gains in strength were desired by including Dacron in such blends, proportions of Dacron in excess of 25% were required. The inclusion of 25% rayon in blends of Dacron, rayon, and Orlon, made little difference in the strength of the fabrics.

The relationship of composition in blends of Dacron, Orlon, and rayon to grab strength is shown in Figure 5. This drawing shows quite plainly that more than approximately 25% of Dacron was required in such blends before a significant increase in grab strength could be realized.

In regard to susceptibility to damage from tobacco embers and the like, the results were, like those for blends of Dacron and rayon, influenced to a considerable extent by the inclusion of rayon which, even as a minor component, made significant improvements in this aspect of performance. Increases in percentages of Orlon in these three component blends were also noted to improve performance in this respect.

As has been previously noted, all fabrics considered in this study exceeded the minimum standards for flammability by a wide margin. The three-component blends showed no unusual burning rates, being in the same general range as that found for two-component blends of the fibers and previously reported in this series.

Studies on resistivity showed that, as with two-component blends, inclusion of as little as 25% rayon in the three-component blend had a dramatic effect on lowering the resistivity of the fabric. While subjective static ratings were not made for the three-component blends, studies with two-component blends indicated reasonable correlation between resistance measurements and subjective ratings of performance with regard to static.

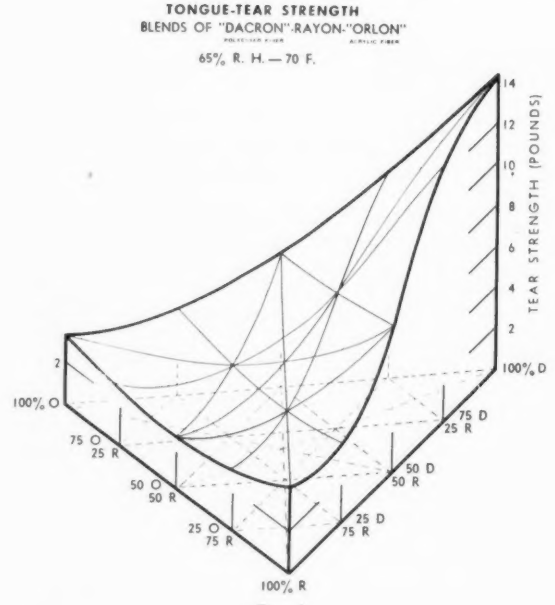


Fig. 4

Measurements of bulk of three-component blends showed no unusual characteristics, giving values which might reasonably be expected from the relative bulks of control fabrics of each fiber contained in the blends. In three-component blends containing Orlon acrylic fiber, increases in content of Orlon produced commensurable increases in bulk.

Similarly, with regard to bending length, values for the three-component blends were for the most part intermediate to the values for the corresponding control fabrics and in general appeared to follow the trends indicated by the related two-component blends previously reported. Fabric liveliness for the three-component blend was in the range of 42 to 48 centimeters per second, a range comparable to that for blends of Dacron polyester fiber with rayon and Orlon with rayon.

(Continued on page 71)

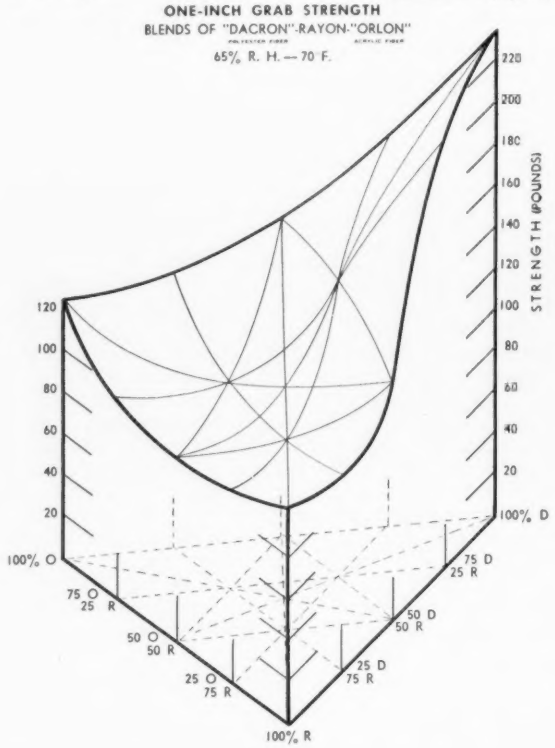
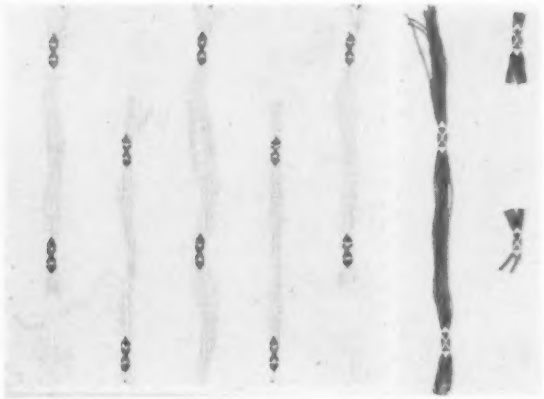


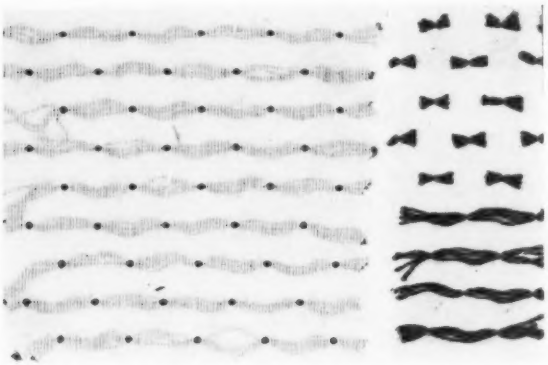
Fig. 5

Ornamentation (Continued from page 33)



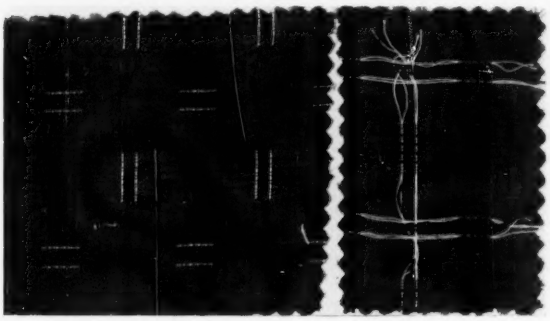
Figs. 76 and 76a—Extra warp spot, face side and back side showing the long floats before clipping and sheared spots.

employed for producing the dot is much heavier than the ground filling to make it more prominent. (Figs. 77 and 77-a)



Figs. 77 and 77a—Extra filling spot, face side and back side partly before and partly after shearing.

4. Warp and filling spots which are the product of extra warp and corresponding extra filling. (Figs. 78 and 78-a) Obviously these are a combination of groups 2 and 3 above.



Figs. 78 and 78a—Extra warp and extra filling spots, face side and back side as woven in the loom and prior to shearing.

Neither the extra warp nor the extra filling is an integral part of the body cloth. The term "extra" here implies that this yarn is in addition to the ground and as such could be removed from the cloth without leaving a gap in the basic structure. This extra yarn floats on the back side of the fabric over long stretches at a time and it is raised to the face only where required to form the figure design. Where the floats are very long between the spots they are clipped and sheared in a subsequent operation to relieve the cloth of the excess weight and to show the design effect more clearly.

We will discuss each of these divisions in detail later but we thought it best to let you know the route we intend to travel and the fundamental features which distinguish one group of spot weaves from the other. From these general divisions we will turn to specific angles of the problem.

In the previous article we have dealt with such spot weaves as described in the major classification 1 above; namely the kind of figure weaves which are formed by one system of warp and one system of filling. In the course of the discussion we have explained also how to select the design paper for drawing figured motifs. It was pointed out that the horizontal and vertical ruling of the paper should be proportional to the warp and filling construction of the finished product. Motifs drawn on paper ruled in that manner offer a good indication of what they will look like in the fabric after finishing.

With regard to the selection of the motif itself it was expressed there that these four factors, size of the figure, thread count of the ground weave, fitness for the purpose and the mechanical means available at the mill are the most important items to be taken into account when deciding on a figure weave for a given fabric. Economics, mill production practices and manufacturing requirements also require attention.

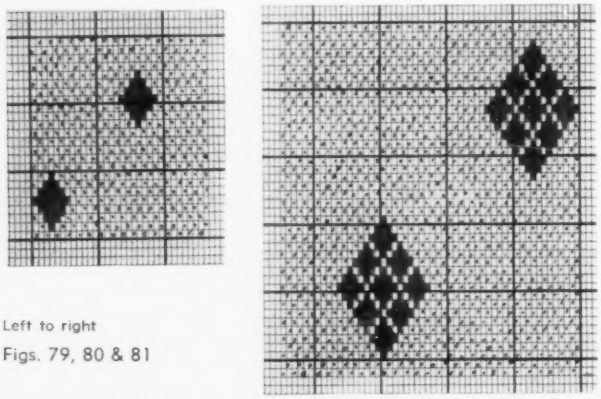
Briefly, this is as far as we have penetrated this subject in the previous article and now we shall continue with a discussion of what the general practices are with regard to spacing these figure weaves on the fabric. Our main consideration still remains with spot weaves made without extra warp or extra filling. (Major classification 1)

Spacing the Figures on the Cloth

Depending on the surface effect desired the spots may be interspersed on the fabric closely or far apart and they may be spaced according to a regular or irregular pattern. The variety of spot weaves is so great and the textures in which they are employed are so many that no cut and dried answer to this problem can be given. Most stylists have their own idea in this respect and there is no accounting for taste when dealing with a fashion fabric. Some stylists prefer systematic distribution such as a plain or satin weave order; others like an irregular arrangement. Apparently most any arrangement goes as long as it is in some way different from what everybody else makes and as long as it remains within the dobby or jacquard head capacity and it incorporates no objectionable manufacturing conditions. Intelligent and flexible judgement of these problems gives the stylist considerable advantage because very often the distribution of the figure on the cloth is a crucial point both from a sales and a production viewpoint.

As a general rule, small figures are placed closer to each other, because if spread too far apart they become too indistinctive to be of decorative value. On the other hand large figures should be dispersed sufficiently so that they do not detract from each other and that they do not dominate the general appearance of the cloth. In other words, to obtain a neat and balanced appearance, the ground weave allocated between the spots should be proportionate to the size of the motif.

These principles are illustrated in the weave diagrams of Figs. 79, 80 and 81. Since the cloth samples from which these figures were taken have a 112 x 80 construction, we have used a 12:8 draft paper to present the repeat approximately in the proper perspective since the rulings of this paper are closely proportional to the construction of the cloth.

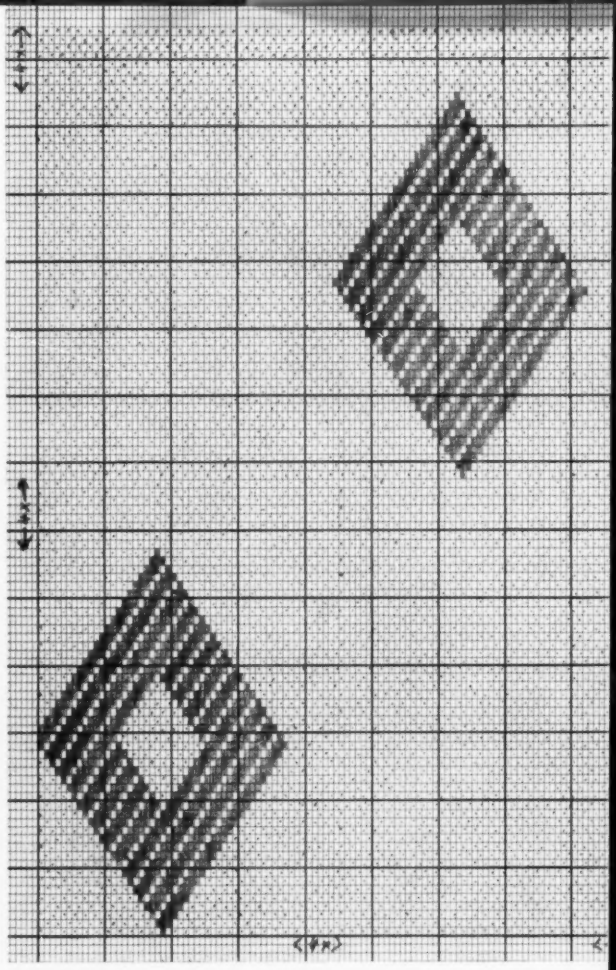


Left to right
Figs. 79, 80 & 81

By observing Fig. 79, you will note, the diamond spots are placed comparatively close to each other. Within the relatively small repeat of 32 ends and 24 picks two figures are placed. Compared to this figure the diamond designs of Fig. 80 are much larger and for this reason they have been arranged farther apart. In this weave the repeat area is 54 x 42. A still larger diamond motif is featured in Fig. 81. In order to make this sizable spot appear well in the cloth the repeat is extended over 156 ends and 156 picks. It will be noted that the actual spacing of the motifs is really greater than appears in Fig. 81. The 4x repeats indicate a 4 times greater spacing than is first apparent from the Figure.

By further examination of the manner in which these three spot weaves (Figs. 79, 80, 81) are arranged you will observe that the squares formed by the repeats are somewhat elongated in the warp direction. In other words they are slightly longer than they are wide. Let us take for example the case of Fig. 81 and calculate the dimensions of the square enclosed by the repeat. As previously stated the construction of the fabric from which this design was taken is 112 x 80, that is, 112 ends and 80 picks per inch. The repeat of the design extends, as you will recall also, over 156 ends and 156 picks. Knowing these conditions all that is necessary is to divide the number of ends in the repeat with the ends per inch to get the width of the repeat; and in the same manner to divide the number of picks in the repeat with the picks per inch to obtain the length of the repeat. Thus $156 \div 112 = 1.39$ inches of the repeat filling-wise and $156 \div 80 = 1.95$ inches of the repeat lengthwise. Accordingly this repeat is $1.95 \div 1.39 = .56$ inches oversquare in the warp direction. By the same token, it can also be observed that the figures themselves are spaced farther apart warp-wise than they are filling-wise. It is important for the designer to know the relative position of the figures and the dimensions of the repeat in order to obtain the desired effect.

In most cases such an elongated arrangement of figure spacings is intentionally done because in the eyes of many viewers a perfect square distribution appears to be stiff or monotonous. Of course, this is strictly a personal opinion and as in other generalizations there is always an exception to it. As a matter of fact, one meets with many pleasing fabrics which feature perfect square motif distribution and even some in which the spots are farther apart in the filling direction. An example of what is meant by perfect square figure distribution is illustrated in Fig. 82.



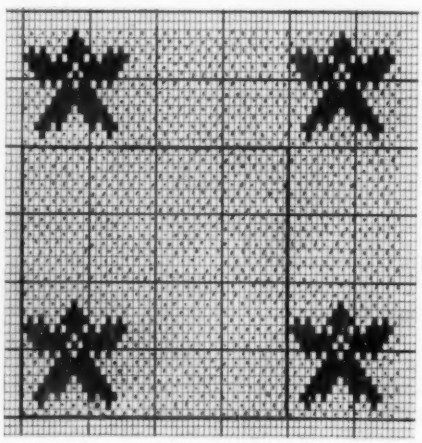


Fig. 82

The repeat area of this Figure is 48 x 32 and we assume the construction of the cloth is to be 120 x 80. A calculation of the length and width of the repeat shows it to be (.400″ x .400″) exactly square.

TO BE CONTINUED

For the DYER and FINISHER

(Continued from page 39)

Cotton Finish Offered

According to Rohm & Haas Co., significant improvements in "wash and wear" finishes for cotton may be achieved by the use of their Rhoplex thermoplastic resin dispersions in conventional thermosetting resin formulations. Use of the Rhoplex resin along with a thermosetting resin such as Rhonite R-1 is said to make it possible for the finishes to improve crease resistance with the same fabric strength, or to achieve the same degree of crease resistance with improved fabric strength. Cotton fabrics that only need "touch-up" ironing after washing are said to be the result of this resin finish.

Nylon Dispersion Available

A new form of nylon has been developed by General Dispersions, Inc., Paterson, N. J., under the trade name Genton 110. The company announced the completion of its first production-sized equipment for the manufacture of an aqueous nylon dispersion following long laboratory and pilot plant studies.

Genton 110 is a dispersion of DuPont's Zytel 61 nylon resin in water. Never before has a nylon dispersion been available for large scale use, according to the company. Genton 110 is said to offer complete safety in operation plus all the properties of nylon.

Neutral Dyeing Wool Black

Cibalan Black BGL, said to be the first straight black of its kind, has been announced by Ciba Co. This direct dyeing color, according to the company, yields clean, neutral shades of gray and black on wool, nylon and silk; provides excellent fastness and level shades by dyeing, padding or printing; shows good affinity in neutral or slightly acid dyebath, and requires no chroming, development or other after treatment. Light fastness on wool is said to be especially good.

Non-Oxidizing Lubricant

Carolina Aniline & Extract Co. offers a non-ionic microcrystalline wax and modified silicone polymer compound in the form of a free-flowing white emulsion, soluble in all proportions and hydroscopic in nature. The emulsion is said to be compatible with all water soluble sizes, resins and gums, and to be readily removable with a warm soap solution. According to the company, Silver Lube RLS does not impair color value or lightfastness, is non-oxidizing and will not yellow with age or under heat.

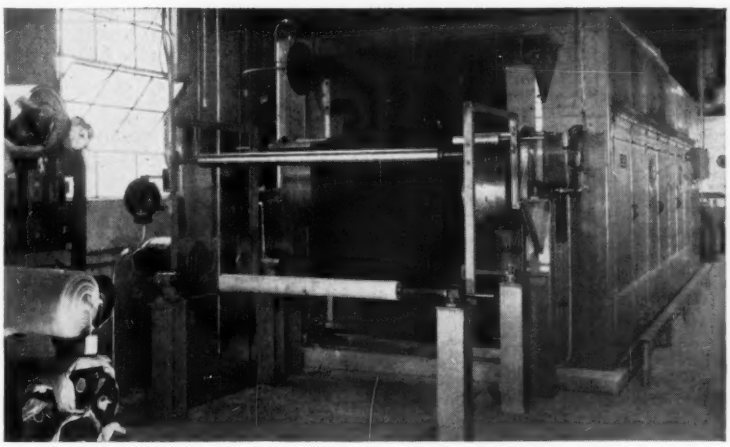
For further information write the editors.

THE NEW Proctor ROLLER CURER

gives 35% higher cures... Doubles Production at Oxford

through...

- UNIFORMITY OF CURING
- CONTINUOUS RANGE OPERATION
- CONTROL OF FABRIC TENSION WHILE RUNNING
- ELIMINATION OF RERUNS



The installation of a new Proctor Roller Curer together with rearrangement of existing facilities, has enabled the Oxford Textile Finishing Company, Oxford, N.J., to increase production from 50,000 to 105,000 yards per day. At Oxford, the new curer achieves 85 to 95% cures.

NEW DESIGN FEATURES

New Proctor ✠ construction reduces installation costs, provides efficient, air tight and well insulated housing—smooth, easy to clean surfaces. Uniform air distribution promotes uniform curing without shading. Variable speed motors power each alternate top roller.

Tension can be adjusted from minimum to maximum while the machine is in operation according to the requirements of the fabric being cured. Unique roll drive permits Roller Curer being placed in range operation with no change in present drive arrangement.

To find out about the complete "Oxford Story" as well as the advantages of a Proctor Roller Curer in your mill, write for latest information bulletin #412.

PROCTOR EQUIPMENT FOR THE TEXTILE FIELD

AUTOMATIC BLENDING SYSTEMS • WEIGHING FEEDS • PICKERS • SHREDDERS • BALE BREAKERS • SYNTHETIC CARDS • GARNETTS • DRYERS FOR FIBROUS MATERIAL • YARN DRYERS • HOT AIR SLASHER DRYERS • CLOTH CARBONIZERS • ROLLER DRYERS AND CURERS • LOOP AGERS FOR PRINT GOODS • TENTER HOUSINGS • OPEN-WIDTH BLEACH SYSTEMS FOR WOVEN FABRICS • MULTIPASS AIRLAY DRYERS • NYLON SETTING EQUIPMENT • CON-O-MATIC WASHERS • CONTINUOUS BLEACH SYSTEMS FOR TUBULAR KNITS • EQUIPMENT FOR PRODUCING "REDMANIZED"® SHRUNK-TO-FIT FABRICS • CARPET DRYERS

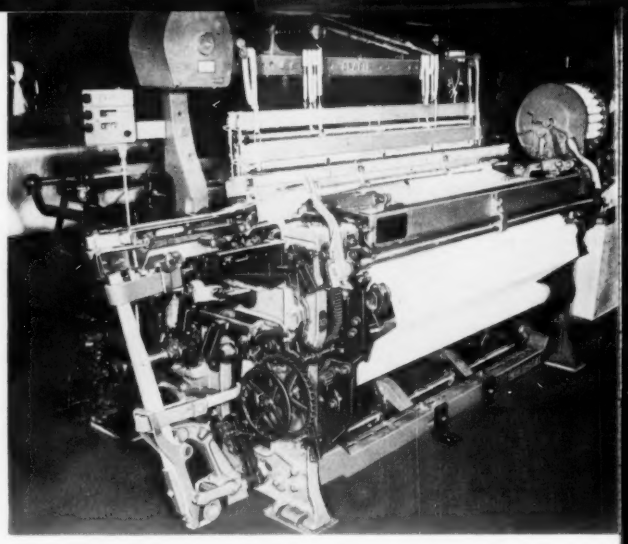
Proctor **PROCTOR & SCHWARTZ, INC.**

Philadelphia 20, Pa.

Manufacturers of Textile Machinery and Industrial Drying Equipment

New MACHINERY

New EQUIPMENT



New Developments Give More Versatility to Draper Loom

Versatility of performance has been greatly increased for the newest models of Draper's X-2 Looms, according to a recent statement by a company spokesman. Among the advantages of the new X-2 looms are the ability to weave a wider range of fabrics than ever before.

Adaptation of new loom constructions has made it possible to weave either fine cottons or synthetics equally well on one loom. The adaptation of this loom to the weaving of spun or filament rayon-type yarns increases weave room flexibility of mills using X-2 models, Draper states.

High-roll ratchet, take-ups of new design, with double take-up rolls (rubber covered), provide the increased frictional surface needed to hold the cloth when weaving synthetics.

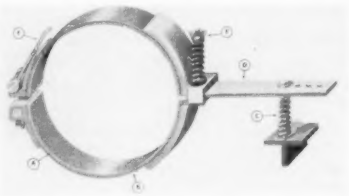
A separate wind-up driven from chain and sprocket from the lower take-up roll provides for easy doffing. A pressure roll, acting against the lower take-up roll, holds the woven fabric securely and permits doffing the roll of cloth without stopping the loom.

The X-2 loom may be equipped with the Draper clock spring top or a dobby head similar to the XD construction. Other new constructions also included with this loom are: linkage type parallel assembly, which gives a more uniform controlled picking action, improves over-all loom operation, and reduces wear on pick motion and parallel parts; a light weight aluminum pick arm and lug strap connection permitting smooth picking action; a transmitter-type drive for smooth, quick starts and positive braking action.

Letoff motion offered

The Ritsky Letoff Motion, available from Steel Heddle Manufacturing Co., 2100 West Allegheny Ave., Philadelphia 32, Pa., has these advantages when installed on looms, the manufacturer reports: the letoff motion ends the necessity for large, bulky weights hanging from each warp beam and obstructing aisles in mills. It permits greatly increased space and unobstructed clearance, making looms more easily accessible.

Steel Heddle points out that the absence of large bulky weights make the Ritsky Letoff Motion highly advantageous for a double beam setup such as that often used for leno weaving and in the pile fabric industry.



A major element in the letoff motion is a pry bar lever which functions as follows: as tension builds up beyond the desired point, the pry bar slightly opens the two ends of the braking arrangement at the tension adjustment point. This prevents overtensioning the warp and has demonstrated that it gives a very uniform warp tension. On the opposite side of the letoff motion is a quick release. This works on a camming action and by simply flipping this lever, tension on the beam is immediately released which facilitates backing the beam if necessary or removing the beam from the loom. Steel Heddle Ritsky Letoff Motions are manufactured for brake drums with circumferences between 31½" and 50" and not less than 1½" wide flat on the drum.

there's an

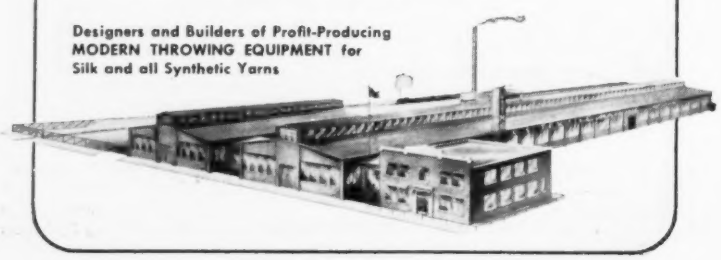
U.S. ACME

for every Throwing Requirement

You name it—stretch yarns or bulk yarns, glass or metallic yarns, special process yarns, etc. . . . U. S. Textile is at your service with machines and know-how!

U. S. TEXTILE MACHINE COMPANY
SCRANTON 8, PENNA., U. S. A.

Designers and Builders of Profit-Producing MODERN THROWING EQUIPMENT for Silk and all Synthetic Yarns

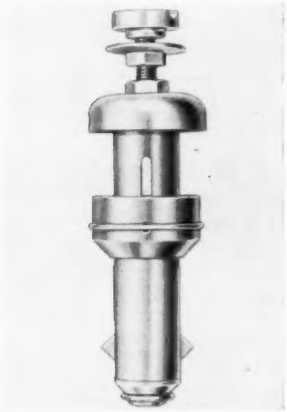


Fiber Testing

Available now for use in any laboratory where close control of temperature and humidity is required, is the ACCO Psychronditioner. The machine is distributed by Air Conditioning Industries Co., Houston, Texas, and is said to be practical for shipping great distances due to its simplicity and ruggedness of construction. Proportioning controls give a plus or minus 2% relative humidity and a plus or minus 2°F.

New Bobbin Hanger

A low cost bobbin hanger equipped with a positive latch has been developed by Hartford Machine Screw Co. Intended for overhead creels, the hanger is built with a strong cast body similar in design to the split base of Hartford spindles.



With the hanger, creeling is faster, according to the manufacturer, because it is easier. The bobbin is easily slipped into place—and this trips the latch to send from inside the hanger a pair of ears giving the bobbin positive support. When the bobbin is empty, another slight lift unlatches the ears which snap back inside the hanger to release the bobbin.

The bobbin hanger has anti-friction suspension of free-running ball construction. The bobbin turns with complete freedom so that the roving is protected from undue tensile strain allowing for uniform spinning. Where required, a brake is available. Mills wishing to examine this hanger in connection with their creel requirements may obtain a sample by writing Hartford Machine Screw Co., Route 3, Box 314, Greenville, S. C., or Hartford 2, Conn.

New Padder from Europe

A new pneumatic two-bowl padder for impregnation, dyeing and finishing has been introduced in this country by Trumeter Co., sole

(Continued on page 68)

SAFETY in NUMBERS

34

STANLEY *Magic Door* CONTROLS

prevent product damage at AVONDALE MILLS by equalizing drafts and pressures

Drafts or pressure conditions created by doors that remain open too long cause product damage, upsetting specified temperature and humidity requirements.
But *not* at the various Avondale Mills where *34 Stanley Magic Door Controls* open doors on approach, keep them open the minimum of time required to let traffic through, then close them automatically. Above, is a Stanley Magic Eye Control in operation at the Avondale Mills' plant, Sylacauga, Alabama.

Your mill, too, will benefit through the installation of Stanley Magic Door Controls to operate swinging, sliding or folding doors:

- *To control temperature and humidity.*
- *Save time by speeding up traffic flow*
- *Eliminate maintenance costs due to damaged doors*
- *Improve working conditions*

MAGIC EYE
(photoelectric)
Actuates door when beam is broken.

PULL CORD
Door is operated only with pull of overhead hand cord.

PUSH PLATES
Wall-mounted push or kick plates. Adaptable to many industrial locations.

Write for free literature and to arrange a visit from the Stanley Representative.

MAGIC DOOR DIVISION, THE STANLEY WORKS
DEPT. H, 1092 LAKE ST., NEW BRITAIN, CONN.

Representatives in Principal Cities

STANLEY TOOLS • STANLEY HARDWARE • STANLEY ELECTRIC TOOLS • STANLEY STEEL STRAPPING • STANLEY STEEL

19th SOUTHERN TEXTILE EXPOSITION

October 1-5, 1956
(Monday through Friday)

Show Hours:
9 A.M. to 6 P.M.

TEXTILE HALL
GREENVILLE, S. C.

See on exhibit latest developments in cost cutting, quality building machinery, equipment, supplies, techniques.

Room Reservations should be made in advance to:

TEXTILE HALL CORPORATION
GREENVILLE,
SOUTH CAROLINA

"An institution of the textile industry since 1915"

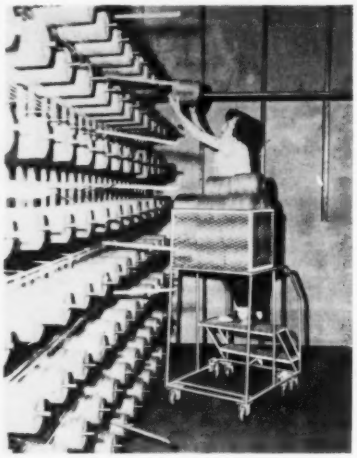
agents for the manufacturer, Maag Brothers, Zurich, Switzerland.

Controls on the new machine are fully pneumatic. Pressure between both rolls and the movement of the finishing trough are made over pneumatic cylinders. This pressure is adjustable between 0 and 12,000 kg. A special valve assures maintenance of the pressure as it is fixed.

Advantages of the machine, according to Trumeter, are ease of operation, wide range of easily controllable pressures, high quality output and freedom from maintenance troubles.

New Creeling Ladder

Ballymore Co. has announced the development and production of a creeling ladder designed to facilitate textile handling. The unit consists of a mobile ladder with a large metal basket-type container mounted on top. It enables the user to speed operations by carrying a quantity of "cheeses" or other items from one location to another. Capacity is said to be better than 105 lbs. The ladder itself rolls smoothly on 4″ ball-bearing casters and locks to floor tightly by a foot-operated Ballylock.



Snag-Proof Box Trucks

Federal Fibre Corp. has made available its box truck of vulcanized fiber with a floor and sides said to be so smooth that there are no rough edges to snag delicate fabrics and yarns. According to the company, heavy gauge electrogalvannealed top moulding and outside reinforcing ribs, running completely around the body, are specially plated to combat rust and add strength to the truck. The walls are coated inside and out with moisture resistant clear varnish, and are available in drop-side or open-side models.

For further information write the editors.

Call MILTON for dependable BEAMS

Light Metal featuring continuous welded construction

NYLON & RUBBER YARN BEAMS

FORGED HEADS
RIGID BARRELS

Forged heat-treated aluminum alloy heads and extra heavy wall barrels designed to withstand extreme pressures of monofilament; fine denier; low-turn nylon; and rubber yarns. 13¾″ and 21″ diameter heads.

SECTION BEAMS

Adaptable to all makes of warpers. Cast aluminum alloy heads and extruded aluminum barrels cannot shrink, swell, splinter or distort.

STEEL BARREL
WARP BEAMS
for BROAD, NARROW FABRIC, RIBBON, VELVET AND CARPET LOOMS

BROADLOOM BEAMS

for C & K and Draper Looms

Shown above is Milton's stud construction (also made with cast iron hubs).

RIBBON LOOM BEAMS

Adjustable head with fixed shaft, or fixed head with removable shaft.

WRITE FOR FREE BULLETINS

MILTON MACHINE WORKS
INCORPORATED
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON • PENNA.

You can kill two Birds with one Stone!

Our SEPTEMBER ISSUE will be "DOUBLE-BARRELLED" this year!

Bird No. 1

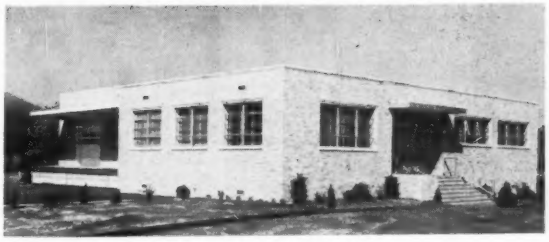
Modern Textile Magazine's September issue will be our annual Man-made Fibers Progress Review and Forecast issue. It will present our usual broad review of ALL new developments in ALL man-made fibers during the preceding 12 months. And it will contain a carefully prepared FORECAST OF NEW THINGS ahead for the man-made fibers with special emphasis on the new fabrics and other end uses coming over the horizon.

Bird No. 2

Also and equally important, MTM's September issue will contain a complete PREVIEW of the Southern Textile Exposition at Greenville, S. C., October 1-5. Our coverage of the show will include a list of exhibitors and the products they will show. We will also list the names of men who will be in attendance. And we will provide a floor plan of the Exposition along with many more details of what will be available at the show for you to see.

With these double-barrelled editorial contents, readership of our September issue will be especially wide and intense. Your advertisement will thus get MAXIMUM EXPOSURE to key men in textiles——men who make buying decisions for the things you have to sell.

Wire at once to reserve your space in MTM's big September issue. Forms close August 5, 1956.



Geigy Opens Chattanooga Office

Geigy Dyestuffs, Div. of Geigy Chemical Corp., New York City, has opened a new Chattanooga office, laboratory and warehouse. Previously the entire southern territory was serviced from the Geigy office in Charlotte, N. C. The new office is under the direction of E. V. Helms.

Burkart-Schier Named Sales Agent by American Viscose

American Viscose Corp., Philadelphia, Pa., and Burkart-Schier Chemical Co., Chattanooga, Tenn., have signed a contract whereby the Tennessee firm will manufacture certain Avisco textile chemicals to specifications and act as sole selling agent in 17 states. American Viscose will sell chemicals directly in the states not covered by the new arrangement.

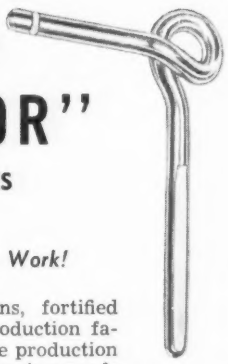
Burkart-Schier will handle sales in Arkansas, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, North and South Carolina, Ohio, Tennessee, Texas, Virginia, and West Virginia.

Testing and evaluation of chemicals for sizing, finishing and conditioning will continue to be done by the textile research department of American Viscose as well as by Burkart-Schier's laboratory.

Specify

COLLINS "IRRIDIOR"

THREAD GUIDES



the finest in Hard Chromium Plated Work!

For over 35 years—Collins, fortified with the technique and production facilities, has pioneered in the production of wire work to suit the growing needs of the textile industry.

And today, Collins "Irridior" Thread Guides are "tops" in the processing of Nylon and Rayon threads—because "Irridior" means harder, denser chrome-plating designed to last longer.

"For those who prefer Matte or Sandblast finish, try our Irridior Matte Finish F75."

COLLINS SUPPLY & EQUIPMENT CO.

1357-97 Monsey Ave. Scranton 2, Pa.

U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in July, 1956. All prices are given as subject to change without notice.

RAYON FILAMENT YARN

American Bemberg

Current Prices

Effective February 15, 1956

Regular Production Reel Spun Yarn

Den/Fil	No Twist Skeins	Twisted* Skeins & Cones	8½ Turns	High Twist Skeins & Cones 12 or 15 Turns		18 Turns
40/30	$1.49	$1.95	....	....	....	$2.08
50/36	1.24	1.50	....	....	....	1.72
65/45	1.14	1.30	....	$1.53	....	1.58
75/60**	1.04	1.18	....	1.41	$1.41	1.49
100/74**	.95	1.08	....	1.33	1.33	1.44
125/60	.94	1.05	$1.09	....	....	....
150/120	.93	1.02	1.12	1.27	....	....
300/225	....	.95	....	....	1.08	....

* Twisted includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.
** Spun Dyed Black 15¢ per lb. extra.

"44" HH Spool Spun Yarn

Den/Fil	No Twist Tubes	No Twist Beams	5 Turn Beams	5 Turn Cones	12 Turn Beams	12 Turn Skeins & Cones	15 Turn Skeins & Cones
40/30	$1.35	$1.35	....	....	....	....	....
50/36	1.05	1.05	....	....	....	....	....
65/45	1.05	....	....	....	....	$1.42	....
75/45**	.97	.97	$1.08	$1.08	$1.31	1.31	$1.39
75/54	.97	.97	1.08	1.08	....	....	....
100/60**	.89	.89	1.03	1.03	1.23	1.23	1.23
125/60	.84	.84	.99	.99	....	....	....
150/90***	.77	.77	.81	.81	....	1.15	1.15
150/120	.81	....	....	.93	....	....	....

** Bemberg Solution Dyed yarns are spun in 75/45 and 100/60 only. Black 15¢ per lb. extra; all other colors 35¢ per lb. extra.
*** Spun Dyed Black 15¢ per lb. extra.

Nub-Lite (Short Nubbi)

Code	Den/Fil	2½ Twist Cones	5 Twist Cones
1516	150/90	....	$1.35
1517*	150/90	....	1.35
2000	200/120	....	.96
2025**	200/120	....	.96
3000	300/180	$1.00	....
4000	400/224	1.00	....
6000	600/360	.98	....
8000	800/450	.98	....

* Code 1517 can be run in warp or filling.
** Code 2025-Softer than 2000.

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold f.o.b. delivery point.

American Enka Corp.

Current Prices

Standard Quality Yarns

Standard Quality Rayon Yarns

A. Natural:

Den/Fil.	Luster	Turns	Weaving Cones	Skeins Beams	Long	Short	Cakes	3 Lb. Knotless Cakes	Knitting Cones
50/18	E	5	S						1.51
75/10	B	3	S&Z				1.03		
75/18	E	4	S						1.17
75/30	B	4	S&Z	1.12	1.12		1.03		1.12
75/30	B	8	S	1.17		1.32			1.17
75/45	P,E	2.5, 4, 5	S&Z	1.12	1.12	1.18	1.03		1.12
75/60	P	3	Z	1.17					
100/14	B	3	S&Z				.91		
100/40	B,E	12	S						1.22
100/40	B,P,E	4, 5	S&Z						.99
100/40,60	B,P	2.5	S&Z	.99	.99	1.03	1.07		.99
100/60	E	2.5	S	1.01	1.01				
125/40	E	3	Z						.91
150/40	B,P,E	2.1,3	S&Z	.86	.86	.89	.94	.81	.81 .85
150/40	B,E	5	S	.86		.89	.94		
150/40	B,E	8	S&Z	.92		.95	1.00		
150/90	B,E	2.1	S&Z	.87	.87				
200/40	P	3	Z						.79
250/60	P,E	2.4	Z						.72
300/50	B,E	3	S	.70	.70				
300/60	B,P,E	2.1	S&Z	.70	.70		.73	.68	.68 .70
300/60	B	3.5	S	.70	.70			.68	
300/60	B	4.3	S	.73	.73			.71	
300/60	B	7	S	.80					
300/40, 120 H.T.	B	2.5, 3.4	S	.72	.72				
450/80	B	3	S	.67	.67			.65	.65
600/80,120	B,E	3	S	.66	.66			.64	.64
900/120	B	3.4	S	.65				.63	.63
900/120 H.T.	B	3.6	S	.67				.65	.65

B—Briglo, P—Perlglo (semi-dull), E—Englo (dull), H.T.—High Tenacity.
B. Tinted Yarns: 5¢ additional per lb.

"Jetspun" Colored Yarns

Den/Fil.	Tenacity	Turns	Weaving Cones	Beams	Cakes	Colors
100/40	Regular	2.5S	1.34	1.34		All
100/60	Regular	4 S&Z			1.26	All
150/40	Regular	2.1S	1.21	1.21		All
300/40	Regular	3.4S	1.05			All
450/80	Regular	3.0S	1.02			All
600/80	Regular	3.4S	1.01			All
900/120	Regular	3.4S	1.00			All
300/40	High	3.4S	1.07			All
600/80	High	3.4S	1.03			All
900/120	High	3.4S	1.02	1.02		All

Terms: Net 30 days F.O.B. Enka, North Carolina or Lowland, Tennessee. Minimum common carrier transportation charges prepaid to first destination on or east of the Mississippi River.

American Viscose Corp.

Effective January 23, 1956

Graded Yarns

Denier	Filament	Type	Short Skeins	Long Skeins	All Cones Beams Tubes	Cakes
50	20	Bright & Dull	$	$1.54	$1.51	$1.40
60	10	Bright			1.36	1.25
75	10-30	Bright	1.19	1.15	1.12	1.03
75	30	Dull			1.12	1.03
100	14-40	Bright	1.07	1.02	.99	.91
100	60	Dull			1.01	.93
150	24-40-60	Bright & Semi-Dull	.94	.89	.86	.81
150	40	Dull		....	.86	.81
150	90	Dull			.87	.82
200	10-44	Bright	.87	.82	.79	.75
250	60	Semi-Dull & Dull	.79	.75	.72	.70
300	44	Bright & Dull	.76	.73	.70	.68
300	234	Dull	....	....	.72	.70
450	100	Bright	....	.69	.67	.65
600	100	Bright	....	.68	.66	.64
900	60-100-150	Bright	....	.67	.65	.63
1200	75	Bright	....	.64	.62	....
2700	150	Bright	....	.67	.65	....

Extra Turns Per Inch

75	30	Bright 6-Turns	$1.31	$1.27	$1.24	$
100	40	Bright 6-Turns	1.19	1.14	1.11	1.03
150	40	Bright 6-Turns	1.04	.99	.96	.91
300	15	Bright 5-Turns	....	....	.75	....
300	44	Bright 6-Turns	....	.83	.80	.78
600	30	Bright 5 Turns	....	.73	.71	.69

Rayflex Yarns

150	60	Rayflex	$	$	$ .89	$ .84
300	120	Rayflex	....	....	.72	.70
450	120	Rayflex	....	....	.69	.67
600	234	Rayflex	....	....	.68	.66
900	350	Rayflex	....	.69	.67	.65

Thick and Thin Yarns

150	40	Bright & Dull	....	....	1.10	....
150	90	Bright & Dull	....	....	1.10	....
200	75	Bright & Dull	....	....	1.02	....
300	120	Bright & Dull	....	....	.92	....
450	100	Bright & Dull	....	....	.89	....
490	120	Bright & Dull	....	....	.92	....
900	350	Dull	....	....	.97	....
920	120	Bright & Dull	....	....	.97	....

Colorspun Yarns

Currently producing 150/30 and 300/60 regular tenacity and 900/234 Rayflex at premiums of $.35 per pound.

Blends

(Continued from page 62)

Blends of Orlon, acetate and Dacron, and rayon, Dacron and acetate

As with other blends studied, Dacron made the greatest contributions to crease recovery. In all cases, increased proportions of Dacron polyester fiber produced increases in crease recovery. The crease recoveries of the blends of rayon, Dacron, and acetate were generally similar to those of the blends of rayon, Dacron, and Orlon acrylic fiber.

Increase of relative humidity to 90% had little effect on blends of Orlon, acetate, and Dacron, in comparison with three-component blends containing rayon in place of acetate, with the greatest loss of crease recovery being registered in blends which contained only minor amounts of Dacron. Blends of rayon, Dacron, and acetate containing major proportions of rayon had significant losses in crease recovery as the result of increasing relative humidity from 65 to 90%.

Dacron showed itself the controlling fiber as far as abrasion resistance was concerned. Acetate showed the lowest abrasion resistance. Dacron caused greater increases in abrasion resistance in blends with higher rayon content than in blends in which acetate or Orlon were in large proportion. In tongue-tear strength measurements, the same general relationships were exhibited for blends of rayon, Dacron and acetate and of Orlon, acetate, and Dacron as were exhibited for blends of Orlon, rayon, and Dacron.

In two-component blends with Orlon or with acetate, 25% Dacron did not improve the strength significantly. However, for certain three-component blends of Dacron with both Orlon and acetate containing 25% Dacron, a significant increase in strength was obtained in comparison with corresponding two-component blends of Orlon and acetate. In the blend of Dacron, rayon, and acetate, however, 25% Dacron caused no appreciable difference in strength as compared with two-component blends of rayon and acetate. In blends in which the rayon content exceeded that of acetate, 35 to 40% of Dacron polyester fiber was required to show any increase in strength over a fabric 100% of rayon.

In regard to susceptibility to damage from hole melting, a high level of Orlon acrylic fiber was found necessary in blends with Dacron and acetate; in blends of rayon with Dacron and acetate, a minimum level of approximately 25% rayon was found to preclude unsatisfactory susceptibility to damage. As reported above, no unusual flammability rates were noted in the three-component blends studied.

In the two three-component blends under discussion, significant reduction in resistivity was noted in the blend containing rayon, with even low percentages of that fiber contributing to the reduction. Acetate, however, was not found to make a similar contribution.

Both of these three-component blends exhibited rather low liveliness characteristics, were intermediate to the values of control fabrics as far as bending length was concerned, and exhibited no unusual bulk characteristics, having values which might reasonably be expected in consideration of the relative bulks of the control fabrics of each fiber in the blend. ■

Textile News Briefs

Botany Buys Markson

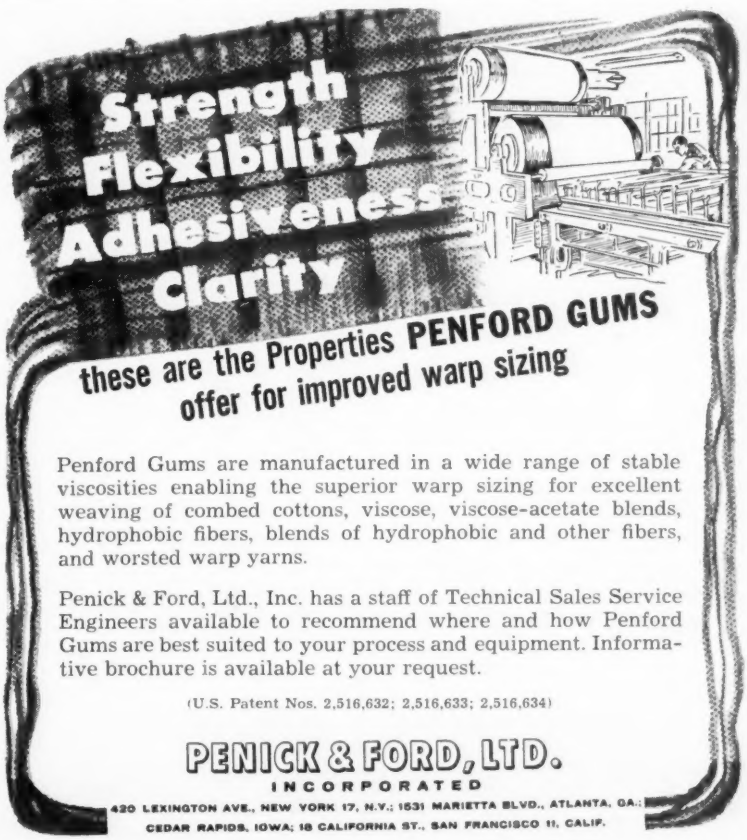
An agreement has been signed by Botany Mills, Inc. and Markson Brothers, Inc,. in connection with the acquisition of Markson by Botany. The agreement is subject to approval by directors of both companies, and if approved will be consummated on August 31, 1956.

Markson Brothers, Inc. is a chain of 50 retail clothing stores in the West and New England which has been operated for more than 50 years by the Markson family.

New Stein, Hall Plant

Plans for construction of a $250,000 manufacturing plant, office building and laboratory at Charlotte, N. C., were announced by Stein, Hall & Co., Inc. The plant is designed to meet the growing demand for textile and adhesive products in the South and will replace the firm's present Charlotte operation.

Construction will begin shortly and is expected to be completed by the end of this year. The new structure will contain 30,000 square feet of indoor manufacturing space with 5,000 additional square feet of outdoor process installations.


Strength
Flexibility
Adhesiveness
Clarity
these are the Properties PENFORD GUMS offer for improved warp sizing
Penford Gums are manufactured in a wide range of stable viscosities enabling the superior warp sizing for excellent weaving of combed cottons, viscose, viscose-acetate blends, hydrophobic fibers, blends of hydrophobic and other fibers, and worsted warp yarns.
Penick & Ford, Ltd., Inc. has a staff of Technical Sales Service Engineers available to recommend where and how Penford Gums are best suited to your process and equipment. Informative brochure is available at your request.
(U.S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)
PENICK & FORD, LTD.
INCORPORATED
420 LEXINGTON AVE., NEW YORK 17, N.Y.; 1531 MARIETTA BLVD., ATLANTA, GA.;
CEDAR RAPIDS, IOWA; 18 CALIFORNIA ST., SAN FRANCISCO 11, CALIF.

Viscose Filament Yarns

The following deposit charges are made on invoices:

Metal Section Beams	$170.00 each
Wooden Section Beams	55.00 each
Wooden Section Beam Crates	30.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools—14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks—14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Spool Crates	20.00 each
Cloth Cake Covers	.05 each

Same to be credited upon return in good condition—freight collect.
Terms: Net 30 days.

Celanese Corp. of America

Current Prices
Effective January 24, 1956

Den.	Fil.	Twist	Beams	Cones	Cakes	Non Shrunk Tubes
#49 and #14 Production						
75/30/3		Bright		$1.06	$.98	....
100/40/3		Bright	$.93	.91	.86	....
100/40/5		Bright	....	.97	.92	....
100/60/3		Bright	....	.92	.87	....
125/40/2Z		Bright	.89	.87	....	....
150/40/3		Bright	.84	.80	.75	....
150/40/2Z		Bright	.82	....	....	....
150/40/5		Bright	....	.86	.81	....
150/40/8		Bright	....	.92	.87	....
150/40/0		Bright (Non Shrunk)	....	.66	....	....
300/50/3		Bright	.69	.68	.66	....
300/50/0		Bright (Non Shrunk)	....	.60	....	....
#20 Production						
150/40/3		Bright	.82	.78	.73	$.72
150/40/0		Bright (Non Shrunk)	....	.66	....	....
150/40/2Z		Bright	.82	....	....	....
300/50/3		Bright	.69	.68	.66	....
300/50/0		Bright (Non Shrunk)	....	.60	....	....
#20 Production						
100/40/3		Dull	....	.91	.86	....
100/60/2Z		Dull	.95	....	....	....
100/60/0		Dull	....	.88	....	....
100/60/5		Dull	.99	.97	.92	....
150/40/3		Dull	.82	.78	.73	.72
150/40/0		Dull (Non Shrunk)	....	.66	....	....
150/90/3		Dull	....	.85	.80	....
250/60/0		Dull (Non Shrunk)	....	.64	....	....
250/60/3		Dull	....	.72	....	.67
#52 Thick & Thin Rayon						
150/60/3		Bright	....	1.10	....	....
450/120/3		Bright	....	.89	....	....

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices
Effective with orders issued April 2, 1956

Bright and Dull

Den.	Fil.	Turns/ Inch Up to		(A) Cones, Beams, Tubes	Skeins	Cakes
40	20	3	Textile "Cordura"	$1.90	1.90	$1.85
50	20	3		1.58	1.58	
50	20	3	Textile "Cordura"	1.60	1.60	1.55
50	35	3	Textile "Cordura"	1.65	1.65	1.60
75	10	3		1.12	1.15	1.03
75	15	3		1.12	1.15	1.03
75	30	3		1.12	1.15	1.03
100	15	3		.99	1.02	.91
100	40	3		.99	1.02	.91
100	60	3	Bright	.99	1.02	.91
100	60	3	Dull	1.01	1.04	.93
125	50	3		.91	.93	.85
150	40	3		.86	.87	.81
150	60	3		.86		
150	60	3	Textile "Cordura"	.87	.88	.82
150	90	3	Dull	.87	.88	.82
150	100	3	Dull	.87	.88	.82
200	35	3		.79	.81	.75
300	20	3		.70	.73	.68
300	50	3.5		.70	.73	.68
300	120	3	Textile "Cordura"	.71	.74	.69
450	72	3		.67	.69	.65
600	96	3		.66	.68	.64
600	240	3	Textile "Cordura"	.67	.69	.65
900	50	3		.65	.67	.63
900	144	3		.65	.67	.63
1165	480	3	Textile "Cordura"	.65	.65	.62
1800	100	3		.65		
2700	150	3		.65		
5400	300	3		.72		

Thick and Thin

100	40	3	#7	1.38	....	1.38
150	90	3	#7	1.10	1.11	1.10
150	90	3	#19	1.10	1.11	1.10
200	80	3	#7	1.02	1.03	1.02
200	90	3	#19	1.02	1.03	1.02
450	100	3	#7	.89	.90	.89
1100	240	3	#50	1.32		1.32
2200	480	3	#50	1.14		1.14

Fiber E

300	50	2½	.83
900	50	2½	.83
900	90	2½	.83
2700	150	2½	.88
2700	270	2½	.88
5400	540	2½	.88

(A) 2¢/lb. additional for cones less than 3# and tubes less than z#.
Terms: Net 30 days.
Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective March 10, 1955
(Revision of March 31, 1955)

Bleached Yarns

Denier	Filament	Turns per In.	Type	2.8 Lb Cones	4.4 Lb Cones	Beams	2.2 Lb Tubes	4.4 Lb Tubes
100	40	2.5 "S"	Bright	.96		.96		
150	40	2.5 "S"	Bright	.83		.83		
150	40	2.5 "S"	Luster #4	.83		.83		
150	40	2.5 "S"	Bright intermediate strength	.84				
200	20	2.5 "S"	Bright	.77				
200	40	2.5 "S"	Bright	.77				
300	44	2.5 "S"	Bright	.68		.68		
300	80	2.5 "S"	Bright	.68		.68		
300	80	2.5 "S"	Luster #4	.68		.68		
300	80	2.5 "S"	Bright extra strong	.70		.70		
450	60	2.0 "S"	Bright		.65	.65		
600	90	1.5 "S"	Bright		.64	.64	.64	.64
900	50	2.0 "S"	Bright		.63	.63	.63	.63
900	150	1.5 "S"	Bright		.61	.61	.61	.61
1100	480	2.0 "Z"	Bright high tenacity		.62	.62	.62	.62

Standard skein lengths at 2,100 yards for 900 denier, 3,200 yards for 600 denier, 4,400 yards for 450 denier, and 6,500 yards for 300 denier—all at 2¢ per pound over cone prices.
900 denier 6 turns—Plus 8¢ for cones—Plus 6½¢ for headless Packages.
Luster #4 is semi-dull.
Terms: net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.
PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

North American Rayon Corp.

Current Prices

First Quality Yarns	Den	Fil	Twist	Cones: Knitting*, Jacquard and Velvet Cones	Cones: No Twist Knitting Cones	Cones: Beams, Tubes** and Weaving Cones	Uncreated Cakes
	75/30		3.5			$1.12	$1.03
	75/30		7			1.25	
	75/30		15			1.32	
Normal	75/30		20			1.35	
Strength Yarns	100/40/60 Brt.		3.5			.99	.91
NARCO	100/40/60		12			1.17	
	125/52		3	$.91		.91	.85
	125/52		10			1.08	
	125/60		3			.92	
	135/52		3			.90	
	150/42		3	.85		.86	.81
	150/42		0		$.66		
	150/60		3			.86	
	150/75		3			.86	
	300/75		3	.70		.70	
	300/75		0		.60		
	300/75		6			.80	
	600/98		3	.66		.66	
	900/46		2.5	.65		.65	
	1800/92		2.5	.65		.65	
Semi-High Strength Yarns	300/75		3			.71	
Hi-NARCO	300/75 Brt.		6			.81	

* Oiled Cones .01 per pound extra for Graded Yarns only.
** 1 lb. tubes $.02 per pound extra for Graded Yarns only.
Terms: Net 30 days f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b. delivery point.

RAYON HIGH TENACITY YARN and FABRIC

American Enka Corp.

Effective April 2, 1956

Tempra (High Tenacity)

Denier	Elongation	Beams & Cones
1100/480	Low	$.62
1230/480	High	.62
1650/720	Low	.58
1820/720	High	.58
2200/960	High & Low	.58

Suprenka (Extra High Tenacity)

1650/720	Low	.61
1900/720	High	.61
2200/960	Low	.60

* Beams Only.
Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland Tennessee; minimum freight allowed to first destination east of the Mississippi River.

Curtis Visits Europe

Raymond Curtis, president of Kenyon Piece Dyeworks, Inc., Kenyon, R. I., visited Europe last month to inspect textile plants in England, Germany and Sweden and study new developments in dyeing and finishing techniques employed in these countries.

Collins & Aikman Changes

Collins & Aikman has discontinued their yarn sales office in New York, but is retaining three regional offices as follows:

J. H. Farrell, with offices at Norwood, N. C., is in charge of the southern territory from Va. and W. Va., south.

J. W. Church is in charge of the northern territory which will include the New England states, New York, and the Midwest, with headquarters at West Barrington, R. I.

H. J. Parker is in charge of Pa., N. J., Del., Md., and the New York City area. His office will be at 51st and Parkside Ave., Philadelphia, Pa.

New Kidde Office

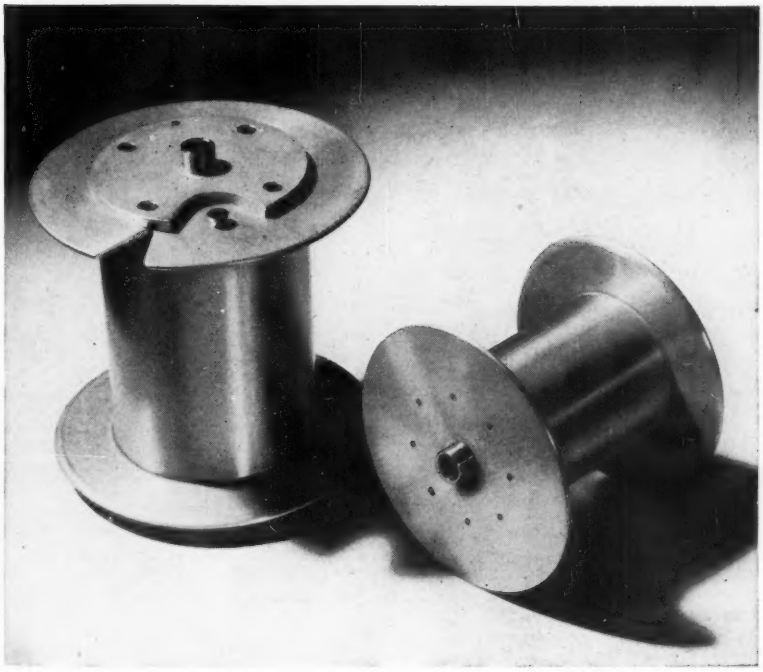
Bloomfield, N. J. is the new home of the Textile Machinery Division of Walter Kidde & Co., Inc., formerly located at Belleville, N. J. The division will henceforth operate as a unit of Kidde Manufacturing Co., and its street address is 35 Farrand St.

Celanese Corp. of America has announced that their European office has been moved to Geneva, Switzerland, from Dusseldorf, Germany. R. J. Davis continues in charge of the office, now at 17, Rue Neuve du Molard in Geneva.

F. A. Gilbert

Frederick A. Gilbert has been elected president of Becco Chemical Division of Food Machinery & Chemical Corp. He succeeds Dr. Max E. Bretschger, who retired after his 30th year with the company.

The Chemstrand Corp. has announced the following changes and promotions in personnel: **Walter H. Hindle,** associate director of textile research divisions; **William Reede,** export advertising coordinator; **James G. Baker,** research librarian; **S. Jack Davis,** assistant director of research, textile processing division, and **Robert P. Nirenberg,** transferred to technical sales service department.



One-piece aluminum take-up and transfer take-up bobbins

FOR THE FIRST TIME AT A MODERATE PRICE...

A ONE-PIECE ALUMINUM BOBBIN*

At last, a strong, durable bobbin made by brazing aluminum heads to an aluminum barrel. The brazing forms a one-piece bobbin with no cracks or possible openings to trap yarn.

This brand new bobbin—as strong as any bobbin on the market—will withstand the tremendous pressures of Helanca or other continuous filament nylon yarns. In tests, this bobbin has withstood pressures far greater than any to be found in normal usage. In usage there has yet to be a failure. This bobbin has been tried, approved, and purchased by leading throwsters and processors of Helanca, as well as other continuous filament nylon.

*Pat. App. for

BW MACK

ALLENTOWN BOBBIN WORKS, INC.

ALLENTOWN PENNSYLVANIA

American Viscose Corp.

Effective April 2, 1956 (Revised as of May 31, 1956)

Super Rayflex

Denier	Filament	Twist	Beams	Cones
1650	980	0	$.61	$.61
1650	980	4.1Z	.61	....

Tire Yarn

1100	490	2.5Z	.62	
1650	980	0	.58	.58
1650	980	3.2Z	.58	
2200	980	0	.58	.58

High Strength

1150	490	2.5Z	.62	.62
1230	490	3.6Z	.62	.62
1650	980	3.5Z	.58	.58
1875	980	3.6Z	.58	.58

Super Rayflex, Tire Yarn and High Strength yarns are sold "Not Guaranteed for Dyeing."

Tire Fabric

1100/490/2	.72
2200/980/2	.665

Above prices based on 80% minimum Carcass, 15% maximum Top Ply, 5% maximum Breaker.

1650/980/2

* Production Factor

525	Open	Carcass	.665
300	490	Top Ply	.675
115	275**	Breaker	.70

* Determine by dividing total ends by picks.

** Orders limited to 5% total 1650 fabric booked for any given period.

SUPER RAYFLEX FABRIC — Add .03 to above tire fabric prices.

The following deposit charges are made on invoices:

Beams	$55.00 each
Crates (Metal)	75.00 each
Fabric Shell Rolls	3.50 each

Same to be credited upon return in good condition—freight collect.

Terms: Net 30 days.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Super Cordura"

(all packages)

1100	480	2	$.68
1250	480	2	.68
1650	720	2	.61
1900	720	2	.61
2200	960	2	.60
2450	960	2	.60

Beams containing ends of direct dyed yarn $3.30 per end extra.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective March 26, 1956

Unbleached Bright High Tenacity Yarns

SINGLE END BEAMS AND CONES:

Den.	Fil.	Turns Per In.	4.4 Lb. Cones	Beams	2.2 Lb. Tubes	4.4 Lb. Tubes
1100	480	1.5 "Z"	.62	.62	.62	.62
1650	720	1.5 "Z"	.58		.58	.58
2200	1000	1.5 "Z"	.57	.57	.57	.57
3300	1440	1.5 "Z"	.58	.58	.58	.58
4400	2000	1.5 "Z"	.57	.57	.57	.57

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

North American Rayon Corp.

High-Strength Yarns—SUPER-NARCO

		Twist	Cones	Beams
1650	720	3Z		$.61
1850	720	3Z	$.61	
Super High Strength Yarns—				
1650	720	1.5Z	.64	.64

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b delivery point.

ACETATE FILAMENT YARN

American Viscose Corp.

Current Prices

Effective December 20, 1955

Bright and Dull

* Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
55/14	$.99	$.97	$1.00	$.93	$.94
75/20	.95	.93	.96	.89	.90
100/28	.91	.89	.92	.85	.86
120/32	.82	.80	.83	.76	.77
150/41	.74	.73	.75	.69	.70
200/54	.70	.68	.71	.66	.67
300/80	.66	.64	.67	.62	.63

* Standard Twist 2¢ additional.

Celanese Corp. of America

Current Prices

Effective December 19, 1955

Bright and Dull

Denier and Filaments	Intermediate Twist 4 & 6-Lb Cones	Beams	4 & 6-TM Tubes	4-Pound Cheeses	Spinning Twist Cones	Beams	O Twist Tubes
45/13	$1.12	$1.13	$	$	$	$1.07	$ ....
55/15	.99	1.00	....	....	.93	.94	.875
75/20	.95	.96	.93	....	.89	.90	.79
75/50	.97	.98	.95	....	....	....	.84
100/26-40	.91	.92	.89	....	.85	.86	.77
120/40	.82	.83	.81	....	.76	.77	....
150/40	.74	.75	.74	.74	.69	.70	.66
200/52	.70	.71	.70	....	.66	.67	....
300/80	.66	.67	.66	....	.62	.63	.60
450/120	.64	.65	.64	....	.60	.61	....
600/160	.62	.63	.62	....	....	....	....
900/80-240	.60	.61	.60	....	....	....	.58

3 to 5 Turns on Cones or Beams — $.02 Additional

150 Denier 12 TM Tubes — .73

55/0/15Dull Tricot Beams — .935

2-Pound Cheeses — .01 Less Than 4-Pound Cheeses

2-BU and 4-BU Tubes — Same Price as 4 and 6-Lb. Cones

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Celaperm Filament Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Beams	Spinning Twist Cones	Beams
55/15	$1.37	$1.38	$1.31	$1.32
75/20	1.34	1.35	1.28	1.29
100/26	1.28	1.29	1.22	1.23
120/40	1.19	1.20	1.13	1.14
150/40	1.11	1.12	1.06	1.07
200/52	1.05	1.06	1.01	1.02
300/80	1.01	1.02	.97	.98
450/120	.99	1.00	.95	.96
600/160	.97	.98	....	....
900/80	.94	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Effective March 11, 1955

Celaperm Black Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Beams	Spinning Twist Cones	Beams
55/15	$1.17	$1.18	$1.11	$1.12
75/20	1.14	1.15	1.08	1.09
100/26	1.08	1.09	1.02	1.03
120/40	.99	1.00	.93	.94
150/40	.91	.92	.86	.87
200/52	.85	.86	.81	.82
300/80	.81	.82	.77	.78
450/120	.79	.80	.75	.76
600/160	.77	.78	....	....
900/80	.74	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Acetate

Denier & Filament	Intermediate Twist 2 & 4 Lb. 5/8" Tubes	4-6 Lb. Twist Tubes	Cones	Beams	Low Twist Cones	Low Twist Beams	Zero Twist Tubes	Zero Twist Beams
45/13/24			1.12	1.13		1.07	1.05	
55/18/24			.99	1.00		.94	.875	.935
75/24		.93	.95	.96	.89	.90	.79	.89
75/50		.95	.97	.98			.84	
100/32		.89	.91	.92	.85	.86	.77	
100/66			.93	.94			.79	
120/40/50		.81	.82	.83	.76	.77	.73	
150/16			.78	.79			.69	
150/40		.74	.74	.75	.69	.70	.66	.69
200/60		.70	.70	.71	.66	.67	.65	
240/80			.68					
300/80	.66	.66	.66	.67	.62	.63	.60	.62
450/120	.64	.64	.64	.65	.60	.61		
600/80/160	.62	.62	.62	.63	.59	.60		
900/44/70/240	.60	.60	.60	.61	.59	.60	.58	
1800/88	.61	.61	.61	.62	.60	.61	.59	
2700/132/210	.61	.61	.61	.62	.60	.61		
3200/160/210	.61		.61	.62				
6000/744								

A. 1# 5/8" Tubes—add .02 to 2 & 4 lb. 5/8" Tubes Price.

B. Regular Twist (3 thru 5 t.p.i.)—add .02 to Intermediate Twist Price.

C. 2 lb. Twisted Tubes—.01 less than 4 & 6 lb. Twisted Tubes on 150-200-300 Denier Intermediate Twist.

New officers elected by Pacific Mills and Burlington Mills, both member companies of Burlington Industries, Inc., are: **Thomas S. Tolar,** president of Pacific, with **Michael M. Devcich, H. Cleon Estes** and **E. H. Hines,** as vice presidents; **David A. Arthur** continues as a vice president, and **Joseph A. Golden** as executive vice president. **Arthur L. Burnet** and **Thomas W. Evans** were elected vice presidents of Burlington Mills.

R. A. Bintz L. Klempner

Robert A. Bintz and **Lester Klempner** have been made assistant vice presidents for National Starch Products, Inc.

Samuel Sinclair has been appointed sales manager of the Lestershire Bobbin Division of National Vulcanized Fibre Co.

Edmund Wellington, Jr., has been designated secretary of The National Federation of Textiles, Inc. **Irene Blunt** continues as executive director and treasurer of the Federation.

W. B. Reese

Warren B. Reese has been made vice president of the Macbeth Corp., Newburgh, N. Y.

G. David McGill has been appointed Southern product manager for Steel Heddle Mfg. Co. **Richard B. Stevens** has been promoted to acting district manager, Greensboro, N. C., office, and **Hugh I. Cash** has been transferred to the Greensboro office. **Everette M. Lail,** has been named sales engineer.

Death

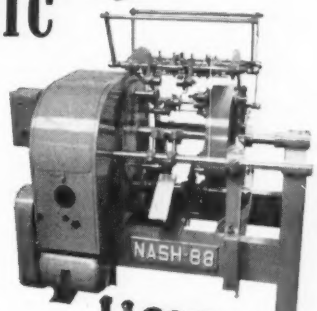
Harold A. Sweet, industrial director Refined Products Corp., died June 29. With the company since 1951, he had been with General Dyestuff Corp. for 34 years.

No YARN Or FABRIC

Is Produced On This

NASH 88

Automatic Bobbin Refinisher



— but defects in spinning or weaving resulting from the use of rough bobbins are effectively prevented . . . .

How The "NASH 88" Performs

Throwing and twisting bobbins are refinished at the rate of ten pieces per minute. Controlled abrasive action on the barrel, inside flanges, and over the top radius is provided. Inside surface and top radius of fibre flanges are furnished. All roughness is removed to prevent tearing of filaments. The "NASH 88" cleans as well as finishes.

Write For Illustrated Bulletin Today

NASH — SPECIAL FINISHING MACHINES — SINCE 1890

J. M. NASH Company

2365 N. 30th Street • Milwaukee 10, Wisconsin

NOW

A "COMPLETE PACKAGE"

THE MODERN WAY TO BUY THROWN, NATURAL OR DYED FILAMENT YARNS

RAYON • NYLON • DACRON • ORLON

Modern standards of production efficiency and quality demand modern methods. The "complete package" — a perfectly thrown, natural or dyed package of filament yarn — prepared to your custom requirements by experts may be the ideal solution to your yarn problems.

As specialists in the exacting job of dyeing and throwing modern yarns since 1922, Hoffner is the logical choice for "complete package" service.

Why not consult us about this new way of streamlining your production and improving quality?

Hoffner RAYON COMPANY

"For that added touch of beauty"

DYERS and THROWSTERS of MODERN YARNS

General Offices at Belgrade & Ontario Streets, Philadelphia 34, Pennsylvania

Plants at Philadelphia and Quakertown, Pennsylvania

SALES REPRESENTATIVES: David F. Swain & Company, 105 W. Adams Street, Chicago 3, Ill. Shannonhouse & Wetzell, Johnston Building, Charlotte 2, N. C.

Color-Sealed

Denier	Intermediate Twist Twisted Tubes 2 Lb.	4 & 6 Lb.	Cones	Beams	Low Twist Cones	Beams	Zero Twist Tubes	Beams
55/18			1.37	1.38		1.32	1.245	1.315
75/24			1.34	1.35	1.28	1.29	1.18	1.28
100/32	1.26	1.26	1.28	1.29	1.22	1.23	1.14	
150/40	1.10	1.11	1.11	1.12	1.06	1.07	1.03	1.06
200/60	1.04	1.05	1.05	1.06	1.01	1.02	1.00	
300/80	1.00	1.01	1.01	1.02	.97	.98	.95	.97

A. Regular Twist—add .02 to intermediate twist prices.

Black

Denier	Intermediate Twist 2 & 4 Lb. ⅝" Tubes	4 & 6 Lb. Twisted Tubes	Cones	Beams	Low Twist Cones	Beams	Zero Twist Tubes	Beams
55/18			1.17	1.18	1.11	1.12	1.045	1.115
75/24		1.12	1.14	1.15	1.08	1.09	.98	1.08
100/32		1.06	1.08	1.09	1.02	1.03	.94	
150/40		.91	.91	.92	.86	.87	.83	.86
200/60		.85	.85	.86	.81	.82	.80	
300/40-80	.81	.81	.81	.82	.77	.78	.75	.77
450/120	.79		.79	.80	.75	.76		
600/160	.77		.77		.73			
900/44-70-240								
1800/88	.74		.74		.73			
2700/132-210	.74		.74		.73			
3000/210								
3200/160	.74		.74					
6000/744								

A. Regular Twist (3 thru 5 t.p.i.)—add .02 in intermediate twist prices.

B. 2 lb. Twisted Tubes are the same as 4 & 6 lb. except on 150-200 and 300 denier intermediate twist where the price is .01 less.

C. 1 lb. ⅝" Tubes—add .02 to 2 and 4 lb. ⅝" Tubes.

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 19, 1955

Estron Yarn, Bright or Dull — White

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Tubes	Beams	Low Twist Cones	Beams	Tubes Twist Zero
55/13	$1.01	$0.99	$0.97	$1.00	$0.93	$0.94	$0.87½
75/19	.97	.95	.93	.96	.89	.90	.79
75/49	.99	.97	.95	.98	....	....	....
100/25	.93	.91	.89	.92	.85	.86	.77
120/30	.86	.84	.82	.85	.78	.79	....
150/38	.76	.74	....	.75	.69	.70	.66
200/50	.72	.70	....	.71	.66	.67	....
300/75	.68	.66	....	.67	.62	.63	.60
450/114	.66	.64	....	.65	.60	.61	....
600/156	.64	.62	....	.63	.59	.60	.60
900/230	.62	.60	....	.61	....	....	.58
900 & Heavier	....	....	....	....	....	....	.58

Current Prices

Chromspun—Standard Colors (Except Black)

Denier & Filament	Regular Twist Cones	Beams	Intermediate Twist Cones	Beams	Low Twist Cones	Beams
55/13	$1.39	$1.40	$1.37	$1.38	$1.31	$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38	....	....	1.11	1.12	1.06	1.07
300/75	....	....	1.01	1.02	.97	.98
450/114	....	....	.99	1.00	.95	.96
900/230	....	....	.94	.95	....	....

Current Prices

Chromspun—Black

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Beams	Low Twist & Spun Twist Beams
55/13	$1.19	$1.17	$1.18	$1.12
75/19	1.16	1.14	1.15	1.09
100/25	1.10	1.08	1.09	1.03
150/38	.93	.91	.92	.87
200/50	.87	.85	.86	.82
300/75	.83	.81	.82	.78
450/114	.81	.79	.80	.76
900/230	.76	.74	.75	....

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

RAYON STAPLE and TOW

American Viscose Corp.

Current Prices

Rayon Staple

	Bright and Dull
Regular	$ .32
Extra Strength	
1.0 Denier	.34
"Viscose 32A"	.36
"Avisco Crimped"	
1.25 Denier	.34
3.0 & 5.5 Deniers	.33
8.0 & 15.0 Deniers	.35
"Avisco Smooth"	
8.0, 15.0 & 22.0 Deniers	.37
Short Staple Blend	.34

Rayon Tow

Grouped Continuous Filaments (200,000 Total Denier)	
1.5, 3.0 & 5.5 Denier Per Filament	.34
9.0 Denier Per Filament	.36
Grouped Continuous Filaments (4400/300 & 2000/1500)	.65

Prices of other descriptions on request.

Terms: Net 30 days.

Celanese Corp. of America

Current Prices

Rayon Tow

	Bright & Dull
1.5, 3, 5 D.P.F.	.34
8 D.P.F.	.36

Courtaulds (Alabama) Inc.

Effective April 23, 1956

Rayon Staple

	Bright	Dull
1½ and 3 denier	$.31	$.31

Available in 1⅛", 1-9/16" and 2".

"Coloray" Spun Dyed Rayon Staple

	1½ Den. 1-9/16"	3 Den. 2"	4½ Den. 6"	Price per Lb.
	(Code numbers for color and denier)			
Black	1404	1419	1425	37¢
Tan	8004	8019	8025	39¢
Medium Brown	8804	8819	8825	39¢
Silver Grey	1004	1019	1025	39¢
Terra Cotta	8204	8219	8225	39¢
Khaki	3004	3019	3025	40¢
Dark Brown	8604	8519	8525	40¢
Slate Grey	0804	0819	0825	43¢
Light Blue	4004	4019	4025	44¢
Sulphur	2004	2019	2025	44¢
Apple Green	5104	5119	5025	45¢
Peacock Blue	4604	4619	4625	46¢
Medium Blue	4204	4219	4225	48¢
Dark Blue	4404	4419	4425	49¢
Hunter Green	5404	5419	5425	49¢
Indian Yellow	2504	2519	2525	49¢
Pink	6004	6019	6025	50¢
Turquoise	4804	4819	4825	50¢
Malachite Green	5204	5219	5225	51¢
Red	7004	7019	7025	56¢

(In addition to the above, Black is also available in:
1½ den. 1⅛" (1401) 3 den. 1-9/16" (1416) 4½ den. 2"
3 den. 1⅛" (1413) 3 den. 2½" (1420) 4½ den. 4")

Terms: Net 30 days, f.o.b. LeMoyne, Alabama. Minimum transportation allowed to points in U.S.A. east of Mississippi River.

The Hartford Rayon Co.

Div. Bigelow-Sanford Carpet Co., Inc.

Rayon Staple

Effective February 8, 1956

REGULAR

1.5 denier Bright
1½" and 2" ..... 32¢

VISCALON 66 (Crimped)

8 denier 2" Bright ..... 35¢
15 denier 3" Bright ..... 35¢
15 denier 3" Dull ..... 35¢

"KOLORLOK"—Solution Dyed Rayon Staple—15 denier 3"

	Bright	Dull
Cloud Grey	45¢	45¢
Sandalwood	45¢	45¢
Nutria	45¢	45¢
Sea Green	45¢	45¢
Mint Green	45¢	45¢
Champagne	45¢	45¢
Café Brown	55¢	....
Midnight Black	45¢	....
Gold	45¢	45¢
Turquoise	45¢	45¢

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

Lost, STRAYED, OR STOLEN CUSTOMERS COME BACK . . . WHEN YOU FEATURE

Sayl-a-Set®

FINISHED FOUNDATION GARMENT FABRICS

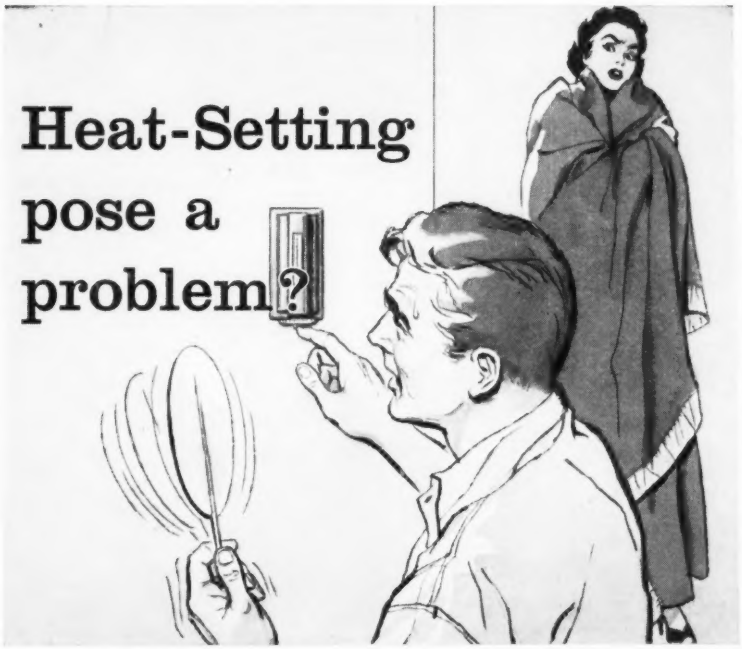
Why do customers "walk out" on a foundation garment brand? Only because the garment fails to live up to its promise . . . because it sags, stretches, frays, or bags out of shape after wear and washing. It takes a long time to make a customer . . . why not guarantee her continued satisfaction? Feature Sayl-A-Set Finished rayon and rayon-cotton corset and brassiere fabrics and be sure that your garments will be

Completely Washable — *Pre-Shrunk*
Stabilized in Dimension — *Lastingly Lovely in Texture*
Exceptionally Serviceable

Sayles

SAYLES FINISHING PLANTS, INC.
Established 1847
SAYLESVILLE, RHODE ISLAND
New York Office: 70 W. 40th St.

Heat-Setting pose a problem?



Try this for size — Supranyl, Stein Hall's miracle size for nylon warps. It's unaffected by heat — and still it can be readily removed in your scouring bath. But that's not all! Supranyl, because of its unsurpassed affinity and adhesion to nylon yarns, offers you maximum protection against abrasion in weaving.

Find out now how Supranyl can save you many dollars in your operation. It requires no additives . . . stands greater dilution . . . and your initial cost is lower. Write today for more information, Textile Department TI-6.

SUPRANYL Withstands Heat-Setting
. . . yet is Easy to Remove!

STEIN HALL
285 MADISON AVENUE — NEW YORK 17, N. Y.
Established 1866

ACETATE STAPLE and TOW

Celanese Corp. of America

Current Prices

Staple

Celanese Acetate Staple	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	$.32
12 & 17 Individual Deniers	.33
35 & 50 Individual Deniers	.36
Variable Acetate Fibers	.30
35 Individual Denier Flat Filament Acetate	.38

Tow

Celanese Celatow Acetate	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	$.34
12 & 17 Individual Deniers	.35
35 & 50 Individual Deniers	.37

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.

All previous prices withdrawn.

NON CELLULOSIC YARN
ACRYLIC

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Orlon"

	1st Grade	2nd Grade
75 denier, 30 filaments	$2.65	$2.35
100 denier, 40 filaments	2.35	2.10
200 denier, 80 filaments	2.25	2.00

Terms: Net 30 days.

These prices are subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

NYLON

Allied Chemical and Dye Corporation

"Caprolan" Tensile Tough Nylon

Effective March 19, 1956

Heavy Yarns

Denier	Filament	Turn/in.	Type**	Package	Price/Lb.
2100	6 d/f	Nominal	HB	Parallel Paper Tube*	$1.27
2500	6 d/f	Nominal	HB	Parallel Paper Tube	1.27
3360	6 d/f	Nominal	HB	Parallel Paper Tube	1.26
5000	6 d/f	Nominal	HB	Parallel Paper Tube	1.25
7500	6 d/f	Nominal	HB	Parallel Paper Tube	1.24
10,000	6 d/f	Nominal	HB	Parallel Paper Tube	1.24
15,000	6 d/f	Nominal	HB	Parallel Paper Tube	1.23

Terms—Net 30 days.

These prices are subject to change without notice. All prices are quoted f.o.b. shipping point.

Lowest freight cost prepaid or allowed east of Mississippi River.

* Parallel Paper Tubes non-returnable, no charge.

** Type is used to describe luster and tenacity.

Type HB: High Tenacity, Bright.

American Enka Corporation

Nylenka Filament Yarn Prices

Effective March 16, 1956

Denier & Filament	Twist	Luster	Type	Tenacity	Package	Yarn Weight per Package	Price per Pound, Std.	Price per Pound, Sub.
15/1	0.5Z	semi-dull	9408	Normal	Pirn	1 lb.	$5.00	$4.80
30/6	0.5Z	semi-dull	9412	Normal	Pirn	2 lb.	2.25	2.10
30/8	0.5Z	semi-dull	9424	Normal	Pirn	2 lb.	2.25	2.10
40/8	0.5Z	semi-dull	9426	Normal	Pirn	2 lb.	1.90	1.75
50/13	0.5Z	semi-dull	9442	Normal	Pirn	2 lb.	1.80	1.70
100/32	0.5Z	semi-dull	9652	Normal	Pirn	2 lb.	1.60	1.55
200/34	0.5Z	bright	9822	Normal	Pirn	2 lb.	1.45	1.40
200/34	0.5Z	bright	9222	Normal	Cone	4 lb.	1.45	1.40
210/34	0.5Z	bright	9204	High	Pirn	2 lb.	1.45	1.40
210/34	0.5Z	bright	9214	High	Cone	4 lb.	1.45	1.40
840/140	0.5Z	bright	9202	High	Pirn	2 lb.	1.30	1.20
840/140	0.5Z	bright	9208 9228	High	Cone	4 lb.	1.30	1.20
840/140	0.5Z	bright	9302	High	Beam	—	1.30	1.20

Pirns charged at $.25 each. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

The Chemstrand Corp.

Current Prices

Denier	Filament	Twist	Type*	Package	Standard Price/lb.	Second Price/lb.
10	1	O	SD	Bobbins	$8.00	$7.60
15	1	O	SD	Bobbins	5.00	4.80
15	1	D	O	Bobbins	5.05	4.80
30	10	Z	SD	Bobbins	2.25	2.10
40	7	Z	SD	Bobbins	2.00	1.75
40	13	Z	SD	Bobbins	1.90	1.75
40	13	Z	D	Bobbins	1.95	1.75
50	17	Z	SD	Bobbins	1.80	1.70
70	34	Z	SD	Bobbins	1.60	1.55
70	34	Z	B	Bobbins	1.60	1.55
70	34	Z	HB	Bobbins	1.65	1.55
100	34	Z	SD	Bobbins	1.60	1.55
100	34	Z	HB	Bobbins	1.65	1.55
140	68	Z	SD	Bobbins	1.55	1.50
200	34	Z	B	Bobbins	1.45	1.40
210	34	Z	HB	Bobbins	1.45	1.40
260	17	Z	HB	Bobbins	1.45	1.35
840	140	Z	HB	Beams	1.30	1.20
840	140	Z	HB	Tubes	1.30	1.20

Terms: Net 30 days.

Lowest transportation paid to destination east of Mississippi River.

Note: All Standard Quality Yarn—No break.

Bobbins, tubes, beams, and crates for beams become the property of the yarn purchaser. Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; and beams and crates for beams are invoiced at $220 and $25 respectively.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Yarn

Denier	Filament	Turn/In.	Twist	Type*	Package	1st Grade	2nd Grade
7	1	0	O	200	Bobbin	$9.00	$8.55
10	1	0	O	200	Bobbin	8.00	7.60
12	1	0	O	200	Bobbin	7.00	6.65
12	4	¼	Z	200	Bobbin	7.00	6.65
15	1	0	O	200	Bobbin	5.00	4.80
15	1	0	O	680	Bobbin	5.05	4.80
15	3	¼	Z	200	Bobbin	5.00	4.80
20	1	0	O	200	Bobbin	4.00	3.80
20	7	½	Z	200	Bobbin	2.75	2.55
20	7	½	Z	680	Bobbin	2.80	2.55
20	20	¾	Z	209	Bobbin	6.00	
30	10	½	Z	100/200	Bobbin	2.25	2.10
30	10	½	Z	680	Bobbin	2.30	2.10
30	26	½	Z	200	Bobbin	2.35	2.15
40	1	0	O	100/200	Bobbin	3.50	3.30
40	7	½	Z	200	Bobbin	2.00	1.75
40	13	½	Z	100/200	Bobbin	1.90	1.75
40	13	½	Z	400	Bobbin	2.00	1.85
40	13	½	Z	670/680	Bobbin	1.95	1.75
40	34	½	Z	200	Bobbin	2.00	1.80
50	7	½	Z	200	Bobbin	1.90	1.70
50	17	½	Z	200	Bobbin	1.80	1.70
50	17	½	Z	670/680	Bobbin	1.85	1.70
60	20	½	Z	200	Bobbin	1.70	1.60
70	17	½	Z	100/200	Bobbin	1.60	1.55
70	34	½	Z	100/200	Bobbin	1.60	1.55
70	34	½	Z	300	Bobbin	1.65	1.55
70	34	½	Z	680	Bobbin	1.65	1.55
80	26	½	Z	200	Bobbin	1.60	1.55
80	68	½	Z	200	Bobbin	1.65	1.55
100	34	½	Z	100/200	Bobbin	1.60	1.55
100	34	½	Z	300	Bobbin	1.65	1.55
100	34	½	Z	680	Bobbin	1.65	1.55
100	50	½	Z	200	Bobbin	1.60	1.55
140	68	½	Z	100/200	Bobbin	1.55	1.50
140	68	½	Z	300	Bobbin	1.60	1.50
200	20	¾	Z	100	Bobbin	1.45	1.40
200	34	¾	Z	100/200	Bobbin	1.45	1.40
200	34	¾	Z	680	Bobbin	1.50	1.40
200	68	¾	Z	100/200	Bobbin	1.45	1.35
210	34	¾	Z	300	Bobbin/Beam	1.45	1.40
260	17	1	Z	100	Bobbin	1.45	1.35
260	17	1	Z	300	Bobbin	1.45	1.35
400	68	¾	Z	100	Bobbin	1.35	1.25
420	68	¾	Z	300	Bobbin	1.35	1.25
780	51	½	Z	300	Bobbin	1.35	1.25
800	140	½	Z	100	Bobbin	1.35	1.25
840	136	1	Z	300	Bobbin	1.30	1.20
840	140	½	Z	300/700	Alum. Tube/ Beam	1.30	1.20
Color-Sealed Yarn							
200	34	¾	Z	140	Bobbin	1.80	1.75
Industrial Yarn						**Price/Lb.**	
2100	340	0	O	300	Paper Tube	1.27	
2520	420	0	O	300	Paper Tube	1.27	
5040	2520	0	O	300	Paper Tube	1.25	
15120	2520	0	O	300	Paper Tube	$1.23	

These prices are subject to change without notice.

Terms—Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item:

Bobbins at 25 cents or 45 cents each depending on type.

Aluminum Tubes at 40 cents each.

Tire Cord Beams (Domestic Shipments) $220 each.

Cradles for Tire Cord Beams (Domestic Shipments) $115.00 each.

(Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co.)

Types

* Type is used to describe luster, tenacity, and size or oil content.

Type 100 Bright, normal tenacity.

Type 200 Semidull, normal tenacity.

Type 209 Semidull, normal tenacity, #S-139 spin finish.

Type 300 Bright, high tenacity.

Type 400 Semidull, high tenacity.

Type 670 Dull, normal tenacity.

Type 680 Dull, normal tenacity.

Type 700, Bright, high tenacity.

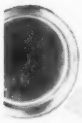
Type 140, Color-sealed, Black, normal tenacity.

maximum performance... durability *with*

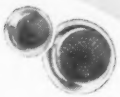
BAKER

precious metal spinnerettes

From any viewpoint—hardness, grain characteristics, corrosion resistance, hole and surface finish—you'll find that Baker Precious Metal Spinnerettes meet and exceed your every requirement.



Precious Metal Spinnerettes by Baker reflect high quality workmanship, superior care and skilled supervision at every step in their manufacture—from melting, alloying, rolling to cup-forming.



The result is a spinnerette which offers maximum performance and protection against mechanically inflicted damage and chemical corrosion.

In addition to Precious Metal Spinnerettes, Baker can supply Stainless Steel Spinnerettes produced with similar high quality workmanship that offer rigidly controlled hardness and grain characteristics. They provide mirror-like finish throughout the hole, an extremely sharp hole edge and a surface finish that offers maximum protection against corrosion.

Write for your copy of "Spinnerettes For Synthetic Fibers".

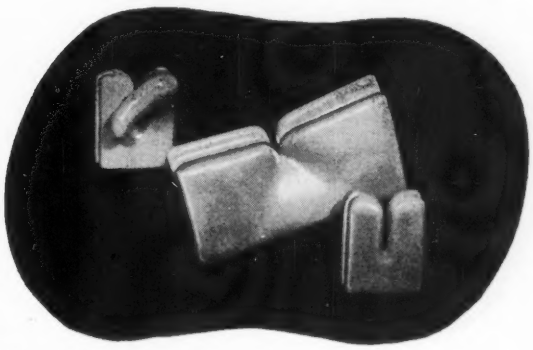
BAKER PRECIOUS METALS

BAKER & CO., INC., 113 ASTOR STREET, NEWARK 5, NEW JERSEY

NEW YORK • SAN FRANCISCO • LOS ANGELES • CHICAGO

ENGELHARD INDUSTRIES

It is wise to question opinions—
unwise to argue with facts.



We who manufacture . . .

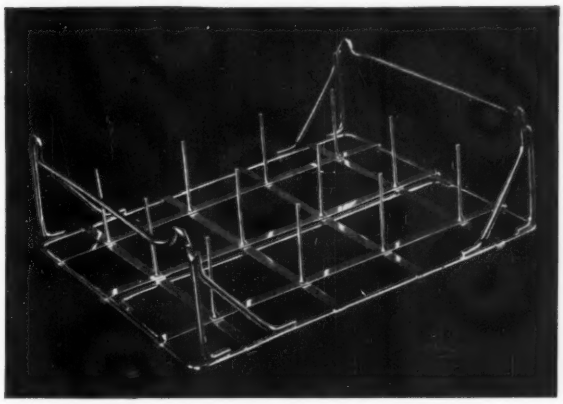
LAMBERTVILLE THREAD GUIDES

have never subscribed to the "it can't be done" approach to guide problems. New design ideas and manufacturing techniques developed at Lambertville have solved many seemingly insurmountable guide troubles. So if you have a knotty guide problem we would like to help with it. Our consultation service, of course, does not obligate you in any way.

LAMBERTVILLE CERAMIC

AND MANUFACTURING COMPANY

LAMBERTVILLE **NEW JERSEY**



New! Sterling Boards of Stainless Steel Bobbin — Cone — Shell — Quill

No rust, no replating, low maintenance when you use Sterling Stainless Steel Boards.

Sterling Boards are self-stacking—eliminate racks—simplify handling—save space.

Sterling Boards are made to your individual specifications from either stainless steel or cadmium plated steel to hold the number and style of package you require. Write today and learn how you can save with Sterling Boards.

DESIGNERS ENGINEERS MANUFACTURERS

STERLING ENGINEERING & MANUFACTURING CO.
WILKES-BARRE, PENNA.
Successor to Johnson Eng. & Mfg. Co.

TEXTILE MACHINERY AND SUPPLIES

Specialists in Stainless Steel Products for the Textile Industry

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron"

Den.	Fil.	Twist	Luster	Type	Tubes 1st Gr.
30	20	0	Dull	57	$2.75
40	27	0	Semi-Dull	56	2.30
40	27	0	Dull	57	2.35
70	14	0	Bright	55	1.90
70	34	0	Semi-Dull	56	1.90
70	34	0	Bright	55	1.90
70	34	0	Dull	57	1.95
100	34	0	Semi-Dull	56	1.85
150	68	0	Semi-Dull	56	1.80
150	68	0	Bright	55	1.80
220	50	0	Bright	51	1.75
250	50	0	Bright	55	1.75
1100	250	0	Semi-Dull	59	1.50
1100	250	0	Bright	51	1.50

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Yarn Types

51 Bright High Tenacity
56 Semi-Dull Normal Tenacity
57 Dull Normal Tenacity
55 Bright Normal Tenacity
59 Semi-Dull High Tenacity

Tubes are invoiced as a separate item at $.70 or $.80 each and are returnable for credit.

* Trademark for du Pont's polyester fiber.

NON CELLULOSIC STAPLE & TOW

ACRYLIC

The Chemstrand Corp.

Current Prices

"Acrilan"

2.0 denier Semi-dull staple and tow	$1.18
3.0 denier Bright & Semi-dull staple and tow	1.12
5.0 denier Bright & Semi-dull staple and tow	1.12
Hi-Bulk staple Semi-dull	1.12

Terms: Net 30 days. Freight prepaid to points east of the Mississippi River.

Carbide and Carbon Chemicals Co.

Div. Union Carbide and Carbon Corp.

Textile Fibers Dept.

Effective November 1, 1955

Dynel Staple

Natural Dynel	
3, 6, 12, and 24 Denier, Staple and Tow	$1.05 per lb.
Whitened Dynel, and Dynel Spun with Light Colors: Blonde, or Gray	
3 and 6 Denier, Staple and Tow	1.20 per lb.
Dynel Spun with Dark Colors: Black, Charcoal, and Brown	
3 and 6 Denier, Staple and Tow	1.30 per lb.

Prices are quoted f.o.b. South Charleston, W. Va.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Orlon" Acrylic Staple & Tow

Denier	Price 1st Grade
2.0 Denier	$1.30
3.0 Denier	1.25
3.0 Denier Color-sealed Black—Staple only	1.60
4.5 Denier	1.20
6.0 Denier	1.20

Staple Lengths—1½", 2", 2⅜", 3", 4½".

High Shrinkage Staple same price as Regular Staple.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

NYLON

American Enka Corp.

Nylenka (Nylon Six Staple)

Denier	Luster	Length (Inches)	Price per pound
3	semi-dull	1⅛, 1½, 2, 2⅜, 3, 4½	$1.25
6	bright	3, 4½	1.25
8	bright	2⅜	1.20
10	bright	3	1.20
15	bright	3	1.20

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Staple and Tow

Denier	Length	Type*	Price/Lb.
1.5	1⅛"—1½"—2"—2½"—4½"	100/200	$1.30
1.5	1⅛"—1½"—2"—2½"—4½"	101/201	1.32
3.0	1⅛"—1½"—2"—2½"—3"—4½"	100/200	1.25
3.0	1⅛"—1½"—2"—2½"—3"—4½"	101/201	1.27
6.0	1⅛"—1½"—2"—2½"—3"—4½"	100/200	1.25
6.0	1⅛"—1½"—2"—2½"—3"—4½"	101/201	1.27
15.0	1½"—3"—4½"—6½"	100	1.20
15.0	1½"—3"—4½"—6½"	101	1.22

Tow price same as Staple for:

1.5 denier type 200 in 330,000 total denier
1.5 denier type 201 in 350,000 total denier
3.0 denier type 100/200 in 430,000 total denier
3.0 denier type 101/201 in 455,000 total denier
6.0 denier type 100 in 330,000 total denier
6.0 denier type 101 in 345,000 total denier
15.0 denier type 100 in 330,000 total denier
15.0 denier type 101 in 350,000 total denier

These prices are subject to change without notice.

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Types

* Type is used to describe luster, tenacity, not crimpset, or crimpset.

Type 100 Bright, normal tenacity, not crimpset.
Type 101 Bright, normal tenacity, crimpset.
Type 200 Semi-dull, normal tenacity, not crimpset.
Type 201 Semi-dull, normal tenacity, crimpset.

Industrial Rayon Corp.

Effective April 9, 1956

The New Nylon Staple

Denier	Price per Lb.
1.5	$1.30
2	1.25
3	1.25
6	1.25
8	1.20
15	1.20

Crimped and set.

Semi-dull and bright lusters.

Cut lengths for all systems of processing.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron" Staple and Tow

Den.	Luster	Type	Staple Length	Tow Bundle	1st Gr.
1.5	Semi-Dull	54	1¼"-4½"	385M	$1.40
3.0	Semi-Dull	54	1¼"-4½"	385M	1.35
4.5	Semi-Dull	54	1¼"-4½"	385M	1.35
6.0	Semi-Dull	54	1¼"-4½"	385M	1.35

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

POLYVINYL ACETATE

American Viscose Corp.

Effective October 1, 1950

Vinyon Staple

3.0 denier ½" unopened	$.80 per lb.
3.0 denier 1¼", 2" opened	.90 per lb.
5.5 denier 1", 3½" opened	.90 per lb.

Terms: Net 30 days.

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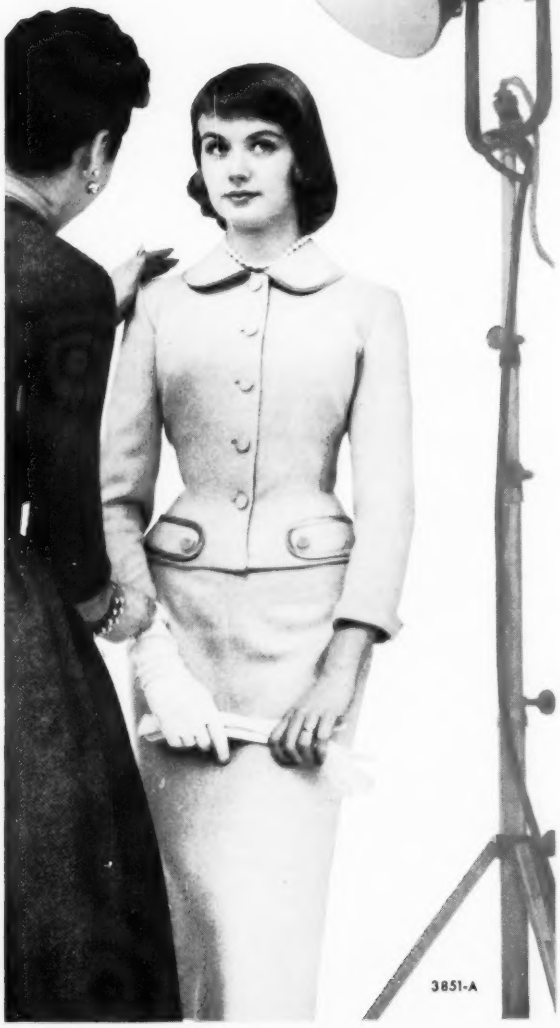

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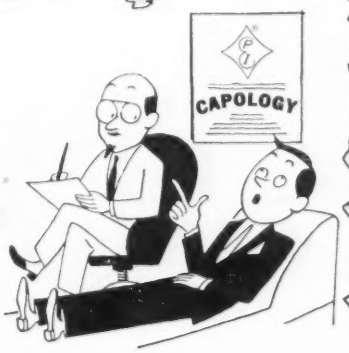

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Exclusive Agents for Snia Viscosa Italy "Merinova"

Effective January 1, 1954

Merinova Staple

3 Denier 1-9/16", 2-½" and 3"	$.81
5 Denier 1-1/16", 1-9/16", 2-½", 4" and 6"	.81
9 Denier 4"	.81
18 Denier 6", 2-½"	.81
60 Denier 14"	.85

Other lengths or deniers can be produced as requested.
Solution-dyed Merinova staple fiber.

Light colors	.90 per lb.
Medium colors	.95 per lb.
Dark colors	1.00 per lb.
French Combed Tops	1.10

Terms: Net 30 days. All prices are duty paid, landed free, freight prepaid to rail point nearest destination.

Virginia-Carolina Chemical Corp.

Fiber Division

Effective January 15, 1951

"Vicara" Staple

	Standard Crimp	Highly Crimped
3 Denier	$1.00 per lb.	$1.05 per lb.
5 Denier	1.00 per lb.	1.05 per lb.
7 Denier	1.00 per lb.	1.05 per lb.

Bleached "Vicara" Staple

	Standard Crimp	Highly Crimped
3 Denier	$1.10 per lb.	$1.15 per lb.
5 Denier	1.10 per lb.	1.15 per lb.
7 Denier	1.10 per lb.	1.15 per lb.

Staple length ½ to 6 in.
Supplied in staple lengths or as continuous tow (270,000 filaments).
Terms: Net 30 days.
Prices f.o.b. Taftville, Conn. on 10% moisture regain basis.

Report on Pile Fabrics

Experimentally developed pile fabrics for insulating flight garments and cold weather gear are evaluated in a recent report of Air Force research released to industry through the Office of Technical Services, U. S. Department of Commerce.

The sample fabrics were manufactured from synthetic fibers, cotton, wool and numerous blends, and were compared to the standard wool pile fabric made according to AF Specification MIL-C-5563. The research found that the type of fiber has little effect on warmth of a pile fabric; however, certain synthetic constructions consistently appeared slightly better. The report also includes results of a study on the mathematical relationship between warmth of a fabric and its physical properties.

The report, PB 111985 Pile Fabrics for Insulation, contains 40 pages. It is available from OTS, U. S. Department of Commerce, Washington 25, D. C., at $1.25 per copy.

The Borregaard Co., Inc.

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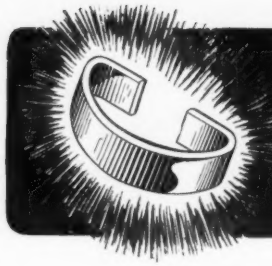

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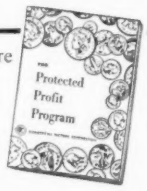

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Calendar of Coming Events

Aug. 20-31—MIT Textile Technology Summer Program, Cambridge, Mass.
Sep. 6-7—The Fiber Society Fall meeting, Warwick Hotel, New York, N. Y.
Sep. 10-15—Perkin Centennial, Waldorf Astoria, New York, N. Y.
Sep. 11—Synthetic Organic Chemical Manufacturers Association meeting, Hotel Roosevelt, New York, N. Y.
Sep. 12—AATT monthly meeting, Vanderbilt Hotel, New York, N. Y.
Sep. 13-15—AATCC National Convention, Waldorf Astoria, New York, N. Y.
Sep. 16-22—ASTM Pacific Coast meeting, Hotel Statler, Los Angeles, Calif.
Sep. 17-21—Instrument Society of America conference and exhibit, Coliseum, New York, N. Y.
Sep. 26-28—Lowell Technological Institute Perkin Centennial observance and open house, Lowell, Mass.
Sep. 27-28—Combed Yarn Spinners Association, Virginia Beach, Va.
Sep. 27-28—National Association of Cotton Manufacturers annual meeting, Portsmouth, N. H.
Sep. 27-28—Northern Textile Association, annual meeting, Portsmouth, N. H.
Oct. 1-5—Southern Textile Exposition, Textile Hall, Greenville, S. C.

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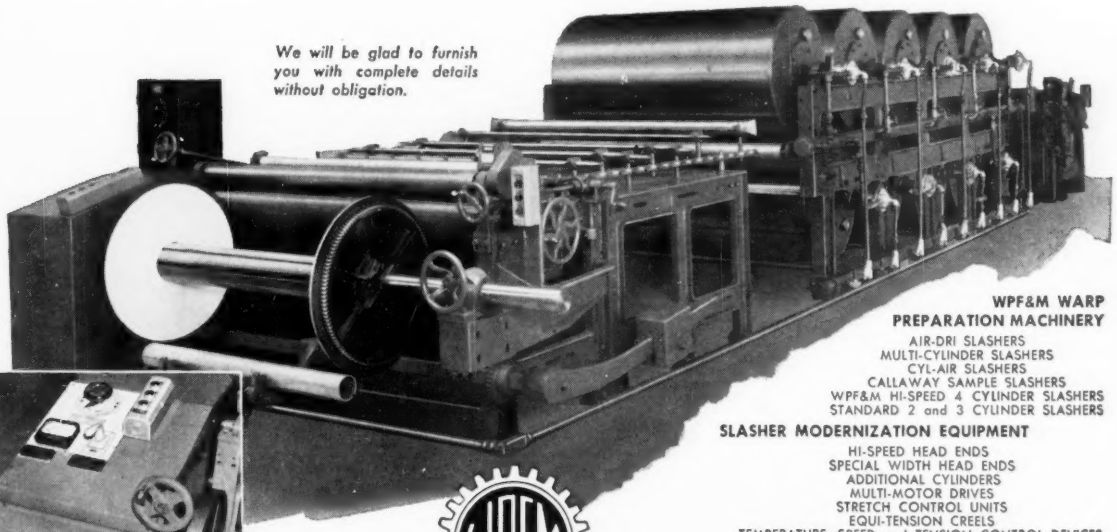

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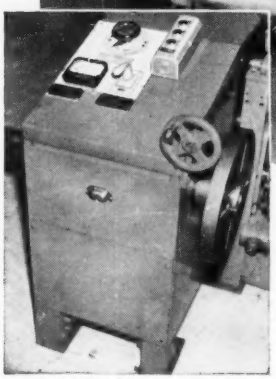

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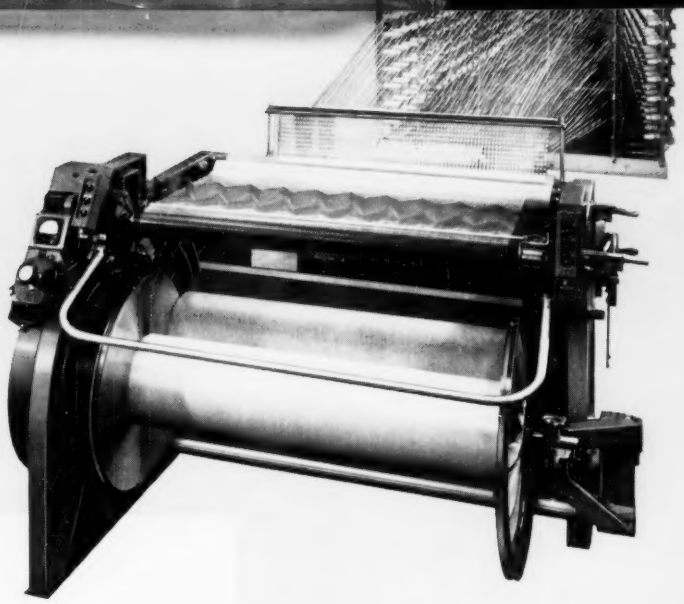

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AlSiMag No. GU-10748-A
Kidde C-13150 (193)
Kidde C-13070 (192)

These are the AlSiMag Guides used on the illustrated Kidde Creel and Warper.

AlSiMag No. GE-15585
Kidde C-13076 (193)

AlSiMag No. GE-18207
Kidde C-13139 (193)

In Eyeboard on Warper and Eyebars of Creel: Part GE-14507.

In Tension: Parts GU-10748-A, GE-15585 and GE-18207.

NOTE: AlSiMag 193 is a conductive material useful for dissipating static. AlSiMag 192 is a similar material, but non-conductive. These AlSiMag Guides are stocked by Kidde Manufacturing Co., Bloomfield, New Jersey, and may be ordered for immediate shipment—or may be ordered from American Lava Corporation. AlSiMag Guides for other Kidde/Sipp-Eastwood equipment are also stocked at Kidde.

Kidde TRADEMARK

Longer life at points of greatest wear is one of the reasons why so many leading textile machinery manufacturers standardize on AlSiMag Guides. They are ***hard*** and ***homogeneous . . . and have no point of sudden failure.*** AlSiMag Guides are ***uniform*** both physically and dimensionally . . . ***assist in better yarn control . . . cut time-consuming replacement of guides . . . speed operations . . . improve quality . . . eliminate costly yarn damages from undetected guide failure!***

This, in brief, is the story of AlSiMag Guides—which exhaustive tests over the years have proven ***cost less per pound of processed yarn!***

Why not try AlSiMag Guides in your own operations? Samples of standard designs will be sent on request; custom samples can be supplied at reasonable cost.

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